

AST  
June, 1961

# AIR CARGO

**ON UNITED AIR LINES...THE WORLD'S LARGEST JET FLEET...  
FOR FASTER, MORE FREQUENT AIR FREIGHT SERVICE**

At the rate of once every fifteen minutes, every day, a United Air Lines Jet Mainliner® takes off. And every flight carries freight—up to 14,000 pounds. United serves more U.S. cities by jet than any other airline... gives you the convenience of frequent service plus the speed needed for same-day delivery.

But the fact that United Air Lines operates the world's largest jet fleet is only part of the United Air Freight story. These jets are backed

by a fleet of Mainliners and fast, all-freight Cargoliners scheduled to fit your needs. This total freight lift gives you a wide choice of flights night and day, to major cities throughout the nation.

Add United's unique *Extra Care* in handling and expediting and you have the best, surest way to ship. Call your freight forwarder, or any United Air Lines sales office, for your next shipment.



# Lufthansa has the shortest close-out time of any overseas airline



**What does this mean to you?** Most overseas airlines require at least 4-hour advance cargo delivery. Lufthansa requires only 1 hour and 15 minutes—sometimes even less.

This makes it easy for you to handle important, last-minute shipments. It's typical of Lufthansa service—unique, efficient beyond expectation. And it doesn't cost you a cent extra.

On arrival, your shipment clears customs fast, too . . . faster than on any other airline. Only Lufthansa has a

special cargo man who prepares all documents—waybills, transfers, arrival notices—20,000 feet over the Atlantic! Within 30 minutes or less after landing, your cargo is ready for customs clearance.

Personal, efficient attention like this characterizes the entire Lufthansa Super Cargo Service—the fastest-growing today.

It insures fast, safe shipment of your cargo to Europe, the Middle East and on to the Orient. Ask your cargo agent to specify Lufthansa.

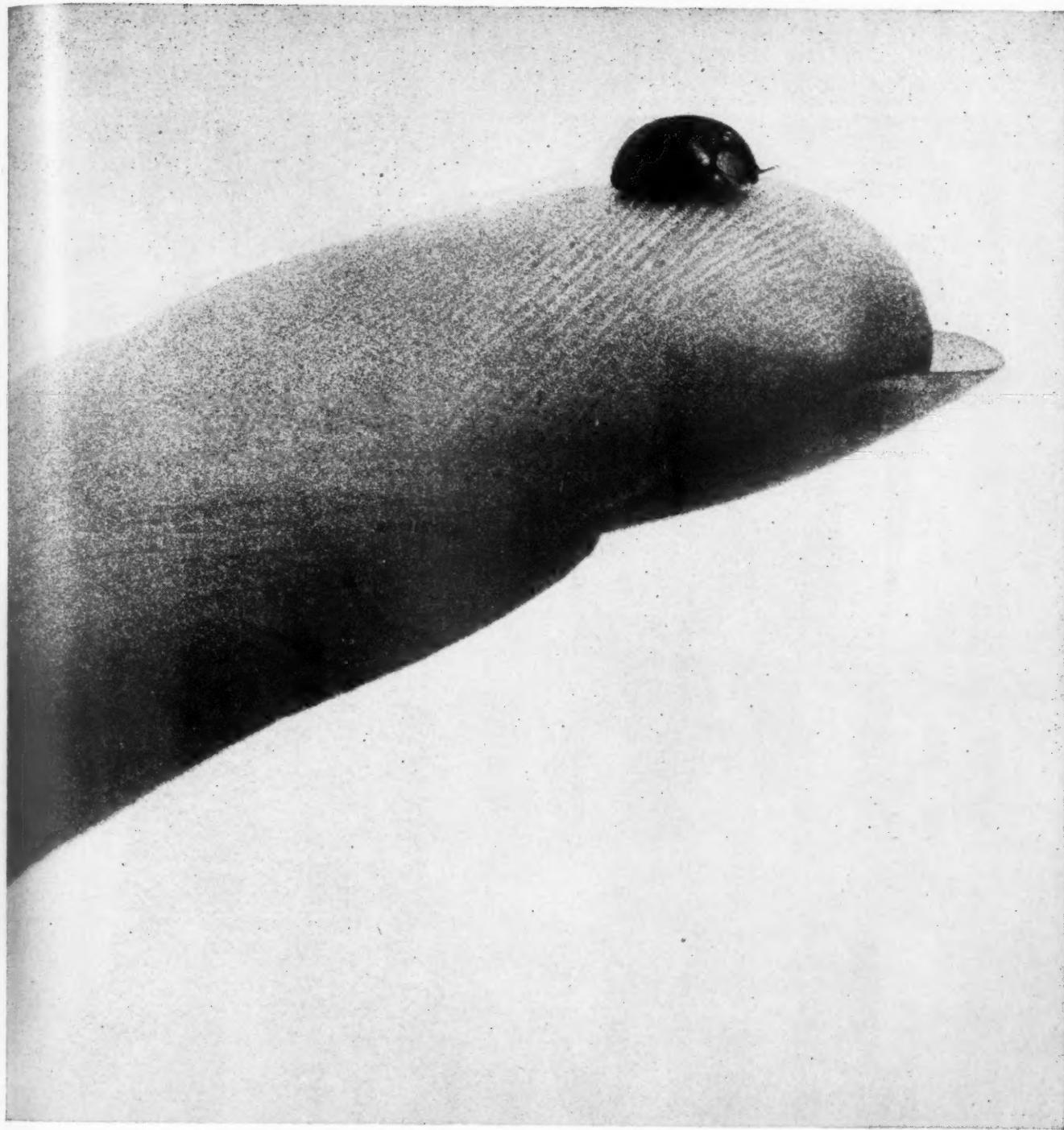


**LUFTHANSA**  
GERMAN AIRLINES

AIR CARGO DIVISION, 410 Park Ave., N.Y. 22, N.Y., PLaza 9-5522. Offices in principal cities of the U.S. and Canada.

Ship vi  
Braniff  
Buenos  
to Dalla  
Wr  
daily se

JUNE, 19



## If it can't fly there by itself—ship it on Braniff

waybills, Atlantic! cargo is

sizes the fastest-

Europe, cargo

SA  
ES

Canada.

Ship via Braniff at brisk Super Jet speeds. Save time. Save money by reducing inventories and packaging costs.

Braniff Super Jets: New York to Miami (via Braniff-Eastern Interchange), thru-jet service to Panama, Bogotá, Lima, Buenos Aires, São Paulo, Rio. Also, Super Jets from New York to Dallas and San Antonio; and from Chicago to Dallas and San Antonio (and back, of course).

Write: Cargo Manager, Box 35001, Dallas, Texas. Ask about Braniff's new DC-6 air freighter—providing daily service between New York City and Texas. Your freight belongs on Braniff.



JUNE, 1961

**BRANIFF *International* AIRWAYS**

# ALL NEW ALL CARGO FLIGHTS TO PARIS

Now Air France offers the best cargo combination ever to Paris and around the world! New ALL CARGO flights, joining Air France's Jet Cargo Service from the U.S., make immediate connections in Paris to all Europe, Africa, the Middle and Far East. Now you can specify bigger, bulkier, heavier complete cargo consignments direct to Europe on a single ALL CARGO flight to Paris. Air France ALL CARGO service features oversize loading doors (almost 9 feet across), convenient nighttime departures, guaranteed bookings. Air France offers 20 departures a week from New York (twice daily), Chicago, Los Angeles, Anchorage, Montreal—more jets to Paris than any other airline. No wonder Air France flies cargo to more cities in more countries than any other airline.

**AIR FRANCE CARGO**  
WORLD-WIDE CARGO SERVICE / WORLD'S LARGEST AIRLINE

# AIR CARGO

an American Aviation Publication

WALLACE I. LONGSTRETH  
Editor

Donald J. Frederick  
Mary L. Miller  
Associate Editors

William H. Martin ..... Art Director  
Ed Guiley ..... Asst. Art Director  
Ed G. Arpan ..... Editorial Consultant

RALPH R. THEILE  
Director of Sales

Virgil Parker ..... Production Manager  
John Gray ..... Advertising Service Manager  
John N. Carlin ..... Circulation Director  
George F. Peterson

Circulation Service Manager  
Richard Gibson ..... Marketing Director  
Carolyn DallaValle ..... Production Assistant  
Subscriptions: \$10.00 per year, United States and Canada; \$11.50 per year for other countries. Single copy price, \$1.00. Address editorial, subscription and advertising correspondence to: Air Cargo, 1001 Vermont Ave., N.W., Washington 5, D.C.

REGIONAL OFFICES:

Chicago: 139 N. Clark St., Chicago 2, Illinois. Phone CEntral 6-5804. TWX, CG 1-4042.

Dallas: John L. Hathaway, 222 Wynnewood Professional Bldg., Dallas 24, Tex. Phone WHitehall 3-4266.

Detroit: John Anderson, 412 Fisher Building, Detroit 2, Michigan. Phone TRinity 5-1555.

Los Angeles: George Votteler, 8929 Wilshire Blvd., Beverly Hills, California. Phone OLeander 5-9161. TWX, BV 7410.

Miami: Richard D. Hager, 208 Almeria Avenue, Coral Cables, Florida. Phone Highland 4-8326.

New York: Robert M. Evans, 20 East 46th Street, New York 17, New York. Phone YUKon 6-3900. TWX, NY 1-812.

Washington, D.C.: 1001 Vermont Ave., N.W., Washington 5, D.C. Phone STerling 3-5400. TWX, WA 1082.

Frankfurt: Friedrich Ebert Anlage 3, Joachim Weissig. Phone: 334810.

Geneva: Anthony Vandyk, European Director, 10 Rue Grenus, Geneva, Switzerland. Phone 321044. Cable Address: AMERAV GENEVA.

London: Norall & Hart, 28 Bruton Street, London, W.I., England. Phone Grosvenor 0356.

Paris: Jean-Marie Riche, 11 Rue Condorcet, Paris (9e), France. Phone TRU 15-39. Cable Address: NEWSAIR PARIS.

Published monthly by American Aviation Publications, Inc., at 1001 Vermont Avenue, N.W., Washington 5, D.C.

Wayne W. Parrish,  
President and Publisher

Leonard Eiserer,  
Exec. V.P. and Gen. Mgr.

Fred S. Hunter,  
V.P. and Editorial Director



JUNE, 1961, VOL. 5, NO. 6

## Features

AN AIRLINE AGENCY WOULD HELP <i>Editorial by Wallace I. Longstreth</i>	7
AIR FORCE UPDATES AIR FREIGHT	18
NATIONAL'S SECURITAINER	21
EAL'S PALLETS AND PROGRESS <i>By Donald J. Frederick</i>	23
NUCLEAR MATERIALS NEED SPEED	25
U.S.-JAPAN AIR CARGO RISE <i>By Anthony Vandyk</i>	27

## Departments

TRENDS	9
NEWS	10
CAB	29
CARRIER ROUNDUP	33
PEOPLE	35
NEW PRODUCTS AND PROCESSES	36
TECHNICAL LITERATURE	37
ON THE DOCKET	38

## Guide Section

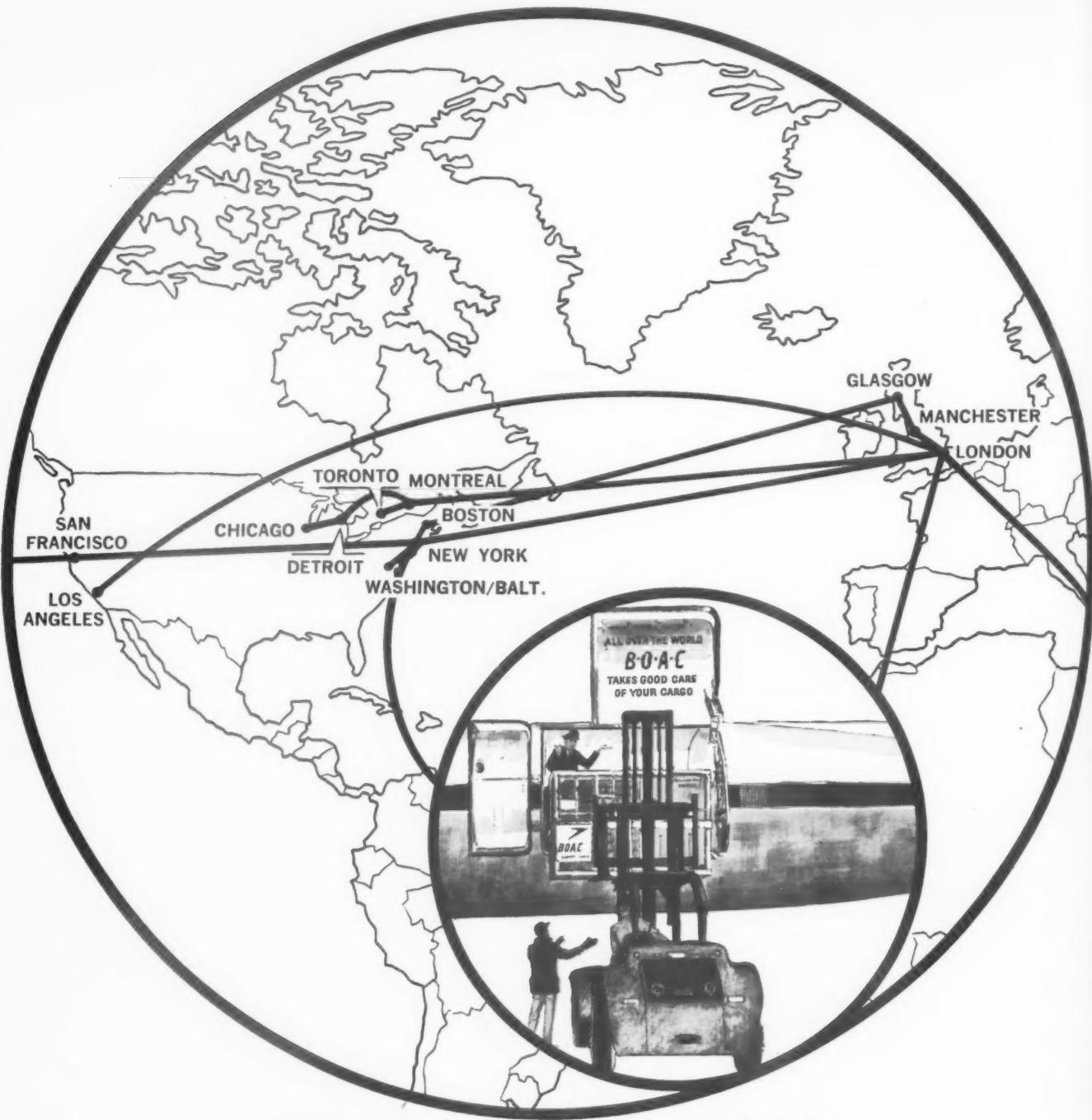
FOLLOWING PAGE 22

AIR CARGO is published monthly as a magazine and as an official guide of airline cargo schedules, a complete station directory for the United States and Canada, and corrected table of carrier acceptance of live animals and unusual shipments.

Every other month, in January, March, May, July, September, and November, AIR CARGO is published in two parts. Part II expands the guide features to include domestic and international air freight rates, documentary requirements for international shipments, and other air shipping information subject to infrequent change. Periodically a Part II is issued containing AIRIMP-CARGO.

The information contained in this publication is compiled with all reasonable care. The publishers do not hold themselves responsible for errors or omissions.

Printed at The Telegraph Press, Harrisburg, Pa. Second class postage paid at Washington, D.C., and at additional offices. Copyright, 1961, by American Aviation Publications, Inc.



## When you ship via BOAC your cargo moves in the best of circles

Anything bound to and from the U.K. to any one of the points mapped above is more rapidly handled, more readily shipped via BOAC and its associates. BOAC "Large Door" DC-7F freighters and 707 jets combine to give you the greatest cargo capacity and frequency from North America to London, Glasgow and Manchester.

Your Freight Forwarder or BOAC Cargo Agent is the man to call to get your cargo moving.

# B·O·A·C

WORLD TRADE BY JET

TAKES GOOD CARE OF YOUR CARGO

In Association with Air India, BEA, QANTAS and TCA.





## EDITORIAL

# An Airline Agency Would Help Unitize Air Freight

**U**NITIZATION, the consolidation of a lot of little shipments on a platform or in a box, has been accepted by the transportation industry as a means of reducing operating costs.

Containerization or palletization is also a very effective means for claims prevention. Every time a cargo handler has to touch a shipment, or a clerk has to record or account for a shipment, there is the possibility of a mistake.

The cargo handler's mistake results in breakage, theft, lost or delayed shipments. The clerical mistakes mis-route shipments, improperly bill for shipments, or lose shipment records.

A good unitization system reduces the number of times human error can be introduced.

Surface carriers have had a considerable success with unitization, particularly with containers. Some of these containers are versatile enough to move between trucks, rail cars, and ships.

The airlines have not done so well. So far, the airlines have not even been able to fully interchange, with other air carriers, containers for dogs. This is more an administrative failure than one of container construction.

Administration is an important part of any unitization program. The airlines would do well to keep an eye on the Air Force program 463L. This is the new system which will produce containers, pallets, materials handling equipment, and documents for a fully integrated air freight operation using all of the transportation facilities of the Air Force. These facilities are principally aircraft and trucks. In each category there is a fairly wide range of types.

The Air Force has one advantage that the airlines have not centralized control. This central control, or authority, can override regional or other differences which are bound to crop up in a large organization.

Since the airlines have had so little success in standardizing pallets and containers and the procedures for handling these elements of unitization, a central control for the airlines might be in order. This has been done by the airlines for air freight pick up and delivery (Air Cargo, Inc.) and for aircraft communications (Aeronautical Radio, Inc.).

The advantages in such agencies are real. They bring order. The airlines need order in the development of pallets and containers. And, they need it now.

Many airlines are trying to decide what is needed in the way of true cargo aircraft. If standards for containers and pallets can be settled, aircraft design will be helped. The aircraft can be fitted to the cargo. Today, the airlines fit the cargo to the vehicle.

The airlines are entering into more and more air-truck arrangements. In the years to come, if this partnership is to be effective, the partners must be able to exchange unitized cargo. If they cannot, operations cost will climb and claims will skyrocket. A coordinating agency can help fix the design of units which will interchange with other modes of transport.

Obviously, a central agency buying standard materials or standard items can buy in larger quantities than a single airline. Volume purchases generally mean lower prices. A central agency could buy in quantity and resell or lease the equipment to the airlines.

Containerization reaches the peak of efficiency when the containers can be re-used, and kept in use. High utilization requires traffic balance, not only in directional flow but in type of commodity. With a central agency operating a pool of containers, balance would be easier to obtain. Certainly, a central agency would cut down on the amount of deadheading required to put empty containers where they were needed.

Some of the airlines' customers will want to use airline containers. The Post Office, forwarders, and some industrial concerns are already doing so. As air freight grows, there will be more of this. A central agency representing all of the airlines will be able to control such container use without interfering with airline sales effort or service standards.

A central agency would have a further advantage in dealing with big customers. Such an agency could resist shipper pressure for concessions without fear of reprisal.

Above all, a central coordinating agency, not just an industry committee, would commit the airlines to do something toward standardizing the elements of unitization which are so urgently needed.

Wallace I. Longstreth





### **This label speeds styles from sewing-room to showroom overnight**

Styles stitched together today can set trends tomorrow anywhere in the 50 states and Canada, when they get the distinctive **AIR EXPRESS** label. This label tells many things to many people. It tells the drivers of 13,000 special **AIR EXPRESS** trucks to pick up and deliver door-to-door. It tells the loading crews of America's 35 scheduled airlines that this shipment goes first on, first off. And it says that it rates kid-glove handling all the way. Are you planning to ship new products or styles? Call **AIR EXPRESS** today and discover how little it costs to put this label on your shipment and get all the competitive advantages that go with it.

**AIR EXPRESS**



CALL AIR EXPRESS DIVISION OF R.E.A. EXPRESS • GETS THERE FIRST VIA U. S. SCHEDULED AIRLINES

## TRENDS

**Relaxation of the 25-mile limit for air freight pick up and delivery** seems relatively certain. Precedent was established in the Hazel Kenny Case (1953), when the Interstate Commerce Commission interpreted the pick up and delivery exemption—Section 203(b)(7a) of the Interstate Commerce Act—to apply to all pick up and delivery services performed for air freight. The pick up and delivery service must be covered by shipping documents of the air carriers and must be performed in accordance with tariffs filed with the Civil Aeronautics Board.

This ICC ruling permits air freight pick up and delivery to go well beyond the commercial zones established for surface carriers. An earlier ruling in the same case (1949) found that 50 miles (from Pittsburgh, Pa.) was within the exemption.

**Better plywood for containers** and other commercial uses has been noted by the Manufacturing Chemists Association. By bonding a film of clear plastic to wood panels, the plywood is reported to have greater wear and stain resistance.

**Unsettled U.S.-San Juan rates** are still a problem. Eastern, Pan American and Trans Caribbean have agreed on a set of rates which Riddle is not ready to accept. The three carrier agreement calls for general commodity rates between New York and San Juan ranging from 24¢ a pound for the under 100-pounds shipments down to 14½¢ a pound at 10,000 pounds or more. Volume breaks would occur at 100 lbs. (19¢), 1100 lbs. (17¢), 3300 lbs. (16¢), 5000 lbs. (15¢), and 10,000 lbs. (14½¢). The minimum shipment charge is \$6. Riddle's tariff calls for a very broad list of specific commodities moving at 14¢ a pound.

**New England shippers will benefit** if the Massachusetts Port Authority can persuade the Interstate Commerce Commission to kill the arbitraries assessed by motor carriers for hauling air freight to and from Logan International Airport (Boston). The Port Authority estimates \$400,000 annually will be saved by shippers using Logan if the 25¢ per 100 pounds arbitrary is removed. The truckers want to increase the arbitrary to 27¢ a hundred. The arbitraries apply to connecting motor carrier transportation, not to local air freight pick up and delivery service in the Boston area. The Port Authority says Logan is the only airport in the country where air freight is penalized by trucker arbitraries.

**A compromise on air freight rates across the North Atlantic** is not easy to reach. Meetings of international airlines in Montreal did not reach agreement in the time allotted and the talks were continued in an all-out effort to avoid the open rate situation. Most observers believe that there will be a compromise, and that rates will be lower. There is worry that the compromise will be a hodgepodge of general and specific commodity rates similar to the rate set-up which is due to expire June 30.

**Pressure is building for an intermode council of public carriers** to examine theft and pilferage in the transportation industry. Airlines will be involved. A lot of high value items travel as air freight.

Such a council will point out to the airlines three things which can be done quickly to improve the situation: better lighting in the cargo areas of airports; tighter screening of personnel who handle air freight shipments; and a tougher policy on unknown or unauthorized persons in cargo handling areas.

## ACI Extends PU&D Service To Air Freight Forwarders

Pick up and delivery service of the scheduled airlines is being made available for use by the air freight forwarders. This major policy change was voted at a recent meeting of the board of directors of Air Cargo, Inc. ACI was authorized to negotiate cartage contracts for the air freight forwarders much in the same manner that ACI arranges the pick up and delivery service for the scheduled airlines.

ACI, a wholly-owned ground service organization of the scheduled airlines, has handled the administration of air freight pick up and delivery service since 1947. From that time, ACI has created a smooth-working, uniform, nation-wide service. ACI cartage contractors operate at every major air freight point. Many contractors use radio-equipped trucks, and can provide pick up service within a half hour, even for the more remote outlying communities.

Under the direction of Emery F. Johnson, president, ACI seeks out the

local drayage concern best qualified to handle air freight. This concern is signed to a contract to handle air freight for all of the scheduled airlines serving the community.

The new arrangements with the forwarders are expected to be beneficial to all parties concerned. The forwarder will have immediately available a nationwide pick up and delivery service. Furthermore, the forwarder accounting problem will be simplified. A single check to ACI will pay ACI cartage contractors regardless of where the pick up and delivery service is performed.

Similarly, the accounting for the cartageman will be reduced. The cartageman need submit only a single bill to ACI for services rendered, no matter how many different airlines or forwarders are involved.

The additional volume resulting from forwarder traffic should also give the cartageman a broader base over which to spread costs. ■

### NSTC Testing Program Technically Reinforced

Top level technical assistance has been enlisted by the National Safe Transit Committee to back its pre-shipment testing program. Objective is to standardize and raise the test procedures run under NSTC auspices to a national performance level.

Container Laboratories, Inc., the organization chosen by NSTC to achieve these goals, is an independent testing and packaging consultant. NSTC stressed that no manufacturer or carrier had any financial interest in CLI. Therefore, the firm is free to serve as the program's technical verification agency completely without bias.

As part of the program, field technical consultants from CLI will visit all NSTC laboratories on a regular basis to assist in verifying and maintaining qualifications and standards under the new program.

NSTC, which has been in existence since 1948, was formed to combat in-transit damage losses. A series of laboratory tests evolved which enabled

member manufacturers to test their packaged products before shipment. Upon successful completion of these tests, a manufacturer is entitled to apply the distinctive yellow and red NSTC seal to his shipments.

Presently there are 89 separate certificated laboratories available to NSTC members.

Standardization is the main theme of the reinforced NSTC program. As John C. Oliver, NSTC exec. v.p., puts it, the new program will confirm a standard test performance level which will reassure each certificated manufacturer that the tests performed on his packaged products are of a quality equal to a national performance standard.

Laboratories will be visited at least once during a 24 month period, but not sooner than 12 months following the date of the initial inspection. These calls are expected to:

verify that each piece of equipment required for the conduct of NSTC tests is of an approved design and construction, that it is correctly installed, and that it functions properly; verify that personnel responsible for

the conduct of NSTC tests are professionally capable and technically competent to do so; and

provide whatever instruction and assistance required to insure that calibration of equipment and performance of tests are of a level conforming to a national standard.

Overall responsibility for coordination of the program rests with William M. Wilkinson, NSTC secretary.

### New Paris Firm To Act as Shipping Manager

A new firm designed to aid the international shipper has been formed in Paris, France. The organization, called Societe Independante des Transports Europeens, has its head office at 67, Blvd. de Clichy, Paris IX, France.

S.I.T.E., which will operate throughout Europe, North Africa and the Near East as a carrier manager, is now setting up a chain of national and local origin and destination agents.

Services which will be offered to the shipper include: routing and expediting in-bound and out-bound shipments, claims adjustment and sales promotion. The firm is also offering freight contracting and traffic consultation services.

The organization is being headed up by John R. Davis, formerly of the Agence Maritime Kirwan, S.A. in Paris. Davis, originally from San Francisco, has been active in the European transportation field for the last four years.

### N. Y.-Paris Cargo Service Offered By Air France

As part of an overall air freight expansion program, Air France has begun 1049H Constellation freighter service between New York and Paris. Two weekly flights will increase the carrier's total cargo lift capacity on North Atlantic routes by 35%.

The flights leave New York International Airport on Wednesday and Saturday at 12:35 p.m. Westbound, the freighters leave Paris' Orly Airport on Thursday and Sunday at 2 p.m. and 2:30 p.m. respectively.

Air France said each flight will carry up to 33,500 pounds of freight and will raise the minimum payload of cargo to 277,000 pounds a week. This figure, the carrier predicted, will climb

(Continued on page 15)

to a 1...  
ing 15...  
crease

Cite  
the ne...  
rear C...  
design...  
cargo.  
by 74

The  
freigh...  
has a

AA S...  
Espe...

A  
sched...  
placed  
and L...

The  
Idlew...  
arrive...  
Thus  
7 p.m.  
livery  
pected  
to 80...  
night.

The  
major  
cedure  
a res...  
6000  
specia...  
adjace...  
stead  
post  
Churc...  
at 10  
office  
nothin...  
truck  
genera...  
Centr...  
into  
gate  
from  
center  
which  
mail)

The  
is illu...  
maste...  
parin...  
other  
mess...  
to Ca...  
Diego  
office  
of the  
deliv...

New  
Desi...

A  
cially  
and

JUNE

(Continued from page 10)

to a half million pounds a week during 1961 as flight frequencies are increased.

Cited as an outstanding feature of the new cargo service is the oversize rear door of the freighter which is designed for easy loading of bulk cargo. The door measures 106.5 inches by 74 inches.

The cargo hold of the Air France freighter measures 75 feet long and has a volume of 5200 cubic feet.

## AA Schedules Jet Especially For Mail

A nonstop jet flight especially scheduled to attract air mail has been placed in service between New York and Los Angeles by American Airlines.

The Boeing 707 jet, flight 21, leaves Idlewild Airport at 11:15 p.m. and arrives in Los Angeles at 1:55 a.m. Thus letters mailed in New York by 7 p.m. will receive first-morning delivery at California points. It is expected that the flight will carry 7000 to 8000 pounds of mail every week night.

The Post Office Dept. has made major changes in ground pickup procedures and distribution practices as a result of the flight. Approximately 6000 lbs. of mail will be delivered by special PO trucks direct to a ramp area adjacent to AA's Gate 4 at Idlewild, instead of clearing through the Idlewild post office. One truck will leave the Church St. Annex in lower Manhattan at 10 p.m., stop at the Brooklyn post office and proceed to Idlewild with nothing but Flight 21 cargo. Another truck will operate from Manhattan's general post office, stopping at Grand Central Annex. The mail will be loaded into AA's baggage containers at the gate area. Other trucks will pick up from New York suburban sectional centers (concentration points into which smaller communities funnel their mail).

The extent of PO support, AA says, is illustrated by the fact that postmasters in the areas covered are preparing posters, direct mail pieces and other promotional aids, stressing the message: "Your letter mail addressed to California—from Sacramento to San Diego—if received by your local post office by 7 p.m., will be on the desk of the addressee by the first morning delivery."

## New PAA Containers Designed For Small Cargo

A new collapsible container especially tailored to accommodate mail and small packages is being used



AGENT STOWS FREIGHT in Pan Am's new collapsible mail and cargo container. Unit replaces a row of seats when space is available on the carrier's jets.

regularly on Pan American World Airways' New York-London route.

Pan Am uses the container when all the passenger seats on jet airliners are not occupied. Installation takes place just prior to departure.

On the average, Pan Am has been installing four of the containers per flight, although it is possible to install 12 of the units on a single plane.

The PAA container, which weighs 122 pounds, has a capacity of 48 cubic feet and can hold 490 pounds of cargo. When not in use, the unit folds to less than ping-pong table size for easy storage.

## MATS Calls For Bids On Hauls Worth \$50,000,000

A request for bids totaling \$50 million in cargo and passenger transport in the year beginning July 1 has been issued by the Military Air Transport Service Headquarters at Scott Air Force Base.

Of the total, about \$13 million is earmarked for service across the Atlantic and \$37 million for the Pacific area. MATS said that preference would be given to bidders who have turbine-powered aircraft.

Only certificated air carriers which participate in the Civil Reserve Air Fleet program are asked to bid on the

MATS contracts. Those awarded contracts will receive options which permit MATS to elect to continue the contracts for two more one-year periods.

To benefit by the options, carriers must have: (1) turbine powered aircraft in use or on order; (2) had no work stoppages during the contract period; and (3) demonstrated satisfactory performance.

## Delta Offers Shippers Economy Freight Plan

A shippers consolidation plan combining air freight and parcel post service has been introduced by Delta Air Lines.

Under the new DAL scheme, shipments move via air freight to the point nearest the addressee. They are then deposited in the post office for parcel post delivery. The economy freight service, as Delta describes it, is designed for daytime jet flights and will be on a space available basis.

In describing the new service, John Pogue, DAL's manager of cargo said: "Since most air freight moves at night, rates are reduced considerably under the economy plan to encourage shippers to take advantage of the day-

## 4th Quarter North Atlantic Cargo Traffic

Cargo Flights																		
	AF	Air India	Alitalia	BOAC	Luft-hansa	El Al	Iberia	Irish	KLM	PAA	Qantas	Sabena	SAS	S&W	Swiss-air	TWA	Total	
Eastbound	...	...	...	5	55	...	...	...	62	118	...	4	146	...	22	58	470	
Westbound	...	...	...	5	55	...	...	...	56	119	...	1	105	...	21	56	410	
Total	...	...	...	10	110	...	...	...	118	237	...	5	251	...	43	114	889	
Cargo (Tons)																		
Eastbound	327.8	31.3	250.8	434.3	624.7	72.1	23.3	60.8	1056.3	1306.4	21.9	239.1	1005.5	346.8	338.7	635.0	6774.8	
Westbound	400.1	20.5	327.5	500.3	511.5	96.5	25.9	26.1	1159.8	1436.8	8.0	301.5	827.6	378.0	338.0	600.7	6958.8	
Total	727.9	51.8	578.3	934.6	1136.2	168.6	49.2	86.9	2216.1	2743.2	29.9	540.6	1833.1	724.8	676.7	1235.7	13733.6	
Mail (Tons)																		
Eastbound	18.5	2.9	5.7	59.0	9.0	3.4	4.8	4.1	26.8	1516.3	0.2	12.9	748.4	19.9	7.5	1044.4	3483.8	
Westbound	92.8	0.1	114.3	301.0	297.1	12.3	12.7	9.4	81.1	443.2	...	52.9	242.4	142.1	123.7	341.9	2267.0	
Total	111.3	3.0	120.0	360.0	306.1	15.7	17.5	13.5	107.9	1959.5	0.2	65.8	990.8	162.0	131.2	1076.3	5750.8	

The traditionally heavy fourth quarter held true to form with 13,733.6 freight tons carried across the North Atlantic for a 18.9% jump over the 11,553.5 tons flown in the third quarter.

time lift. Saving, in some cases is as much as 40%.

Meanwhile, DAL's freight traffic continues to climb. In March, the carrier flew 1,529,000 ton miles for a 15% increase over the same month last year.

Pogue attributed most of the gain to an increase in wearing apparel and cut flower shipments prior to the Easter season, a general upturn in the economy, and shipping activity in the electronics field.

### ABC Has New Office In Philadelphia

A Philadelphia office has been opened by ABC Air Freight. Located at Delaware and Jackson Streets, the new facility will expedite shipments anywhere within the continental limits of the U.S. The New York based forwarder said the Philadelphia office would follow a no-minimum charge policy. Carl Cohen has been picked to manage the new installation.

### Atlanta Freight Office Established By FTL

Looking to introduction of the CL-44D turboprop freighter next fall, The Flying Tiger Line has established an air freight sales office in Atlanta.

John L. Higgins, FTL's vice president of sales, explained that research into traffic for the big freighter revealed a good freight potential in the Atlanta area.

"Hence," said Higgins, "we have decided to establish our own sales office in Atlanta to service existing and potential accounts. Traffic will be handled with connecting carriers serving both coasts through our Chicago and New York terminals."

Eastbound, the transatlantic carriers chalked up 6774.8 tons. Westbound, the total was 6958.8 tons.

All of the airlines listed, with the exception of El Al Israel, posted in-

creases in both cargo and mail over the third quarter.

Mail reached 5750.8 tons for an impressive 37.9%, gain over the 4170.9 tons registered in the third quarter.

### PAA Expands Air-truck To Upstate New York

A new air-truck agreement signed Pan American World Airways and Oneida Motor Freight provides several communities in New York state with direct air cargo service to overseas points served by PAA.

The pact marks the seventh air-truck agreement signed by Pan Am in the past two years. Specifically, it provides for the direct movement of cargo between 200 trading, industrial, manufacturing and agricultural centers overseas and similar locations in New York State.

Imported products are flown to New York International Airport aboard Pan Am's aircraft and are then trucked to destinations throughout upstate New York by Oneida. The reverse procedure applies to exported goods.

### BEA Signs Pact For Three Argosys

Three turboprop Argosy freighters have been ordered by British European Airways. The freighters, ordered in a firm contract with Armstrong Whitworth Aircraft Ltd., are expected to produce an annual cargo capacity of 16.2 million ton miles—almost double the freight ton-mileage flown by BEA's entire fleet in 1960.

Delivery of the aircraft will begin in November. All three are expected to be in service by spring, 1962.

The first Argosy will be placed on the Copenhagen, Milan and Manchester routes from London. Eventually, the three freighters will take over BEA's existing all-cargo scheduled operations to 12 destinations from London.

All three freighters will be equipped

with the Armstrong Whitworth "Ramat" cargo-handling system. Under this system, cargo pallets are rolled aboard the freighters on a movable bridge section which aligns with light alloy rollers laid in strips on the floor of the aircraft.

### New JAL Cargo Flight Links Seattle And Tokyo

Inauguration of service to Seattle and a third weekly DC-7F cargo flight between the U.S. and Tokyo are featured in Japan Air Line's new freight schedules.

Eastbound, two flights a week operate from Tokyo to Seattle via Anchorage and one from San Francisco to Tokyo via Honolulu.

The Seattle flights leave Tokyo at 8:30 p.m. on Tuesdays and Saturdays, arriving in Seattle at 10:20 p.m. the same day. The third flight leaves Tokyo at 11:59 p.m. every Thursday, arriving in San Francisco at 6 a.m. on Friday.

All three westbound cargo flights leave San Francisco International Airport at 5 p.m. on Wednesdays, Saturdays and Sundays, arriving in Tokyo at 11:30 a.m. on Fridays, Mondays and Tuesdays.

### S&W Asks CAB For Passenger Authority

A request for authority to carry transatlantic passengers has been filed with the Civil Aeronautics Board by Seaboard & Western Airlines. The all cargo airline wants the authority on an experimental basis to fly passengers on daily cargo flights between New York and major European cities.

through  
this door  
can go the  
biggest cargo  
now flown  
across the  
Pacific

Japan Air Lines now has DC-7F Freighters in cargo service.  
Capacity: 30,500 lbs. Floor load limit: up to 200 lbs. per square foot.  
Aft door sizes: 124" wide by 78" high.

No plane can carry anything bigger across the Pacific • Or more dependably. Your cargo is lovingly handled, securely packed in a pressurized, temperature-controlled compartment. JAL's experienced personnel, both in the U.S. and the Orient, sees that it gets there — on time. An exclusive extra: assurance of no "off-loading." Also: reserved space, in-transit information, protected trans-shipment on from Tokyo, daily service for smaller cargo on JAL's DC-8C passenger jets.

It's good business to specify JAL Courier Cargo. The rates? Often much lower than the total cost of sea shipment. Talk to your cargo agent or your forwarder. Or call the JAL cargo office in your city.



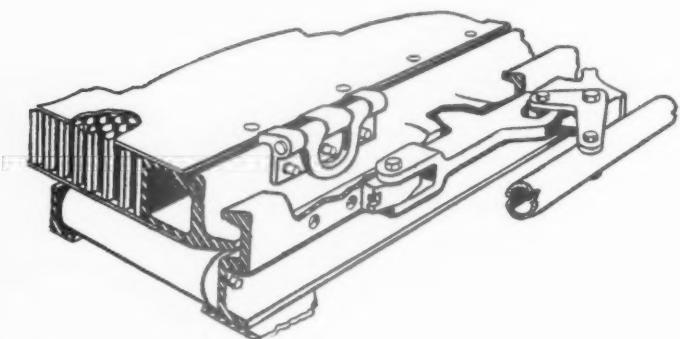
**JAPAN AIR LINES COURIER CARGO**

U.S. to Japan and all the Orient

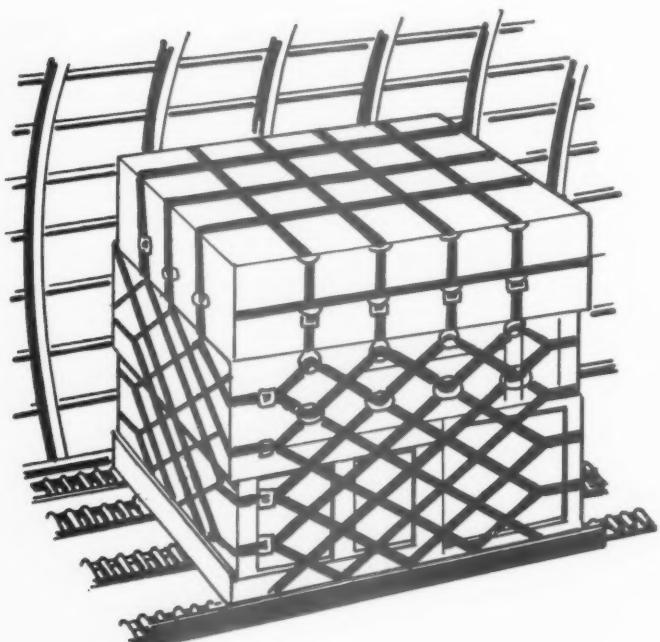
Offices in New York • San Francisco • Los Angeles • Seattle • Chicago • Cleveland • Detroit • Boston • Philadelphia • Washington • Dallas • Houston • Denver • San Diego • Honolulu • Vancouver • Toronto

# Air Force Updates Air Freight System

**A new, fully integrated system using new techniques and materials will speed air freight from source to user**



ABOVE—The locking mechanism operates through slots in the restraint rail. The locks engage notches in the pallet lip.  
BELOW—The pallet load is secured against movement in any direction by a diamond shaped nylon net anchored to the pallet base.



WORLD WAR II demonstrated beyond question that "things could be hauled by airplane, and that it made sense to do so. The introduction of modern, high performance cargo aircraft demonstrated that the movement of "things" by air could be seriously compromised unless ground handling were as modern as the aircraft.

As the first users of true cargo aircraft, the military first encountered the problem of updating a ground handling operation which had not changed materially since the airplane was invented.

With the introduction of the Lockheed C-130 in 1954 and the Douglas C-133 in 1956, the Air Force set about to find a way to process and load air freight shipments as fast as these same shipments could be flown across the United States, or even overseas.

Various systems were developed. Each one solved a problem of a particular airplane operating out of a particular base.

Early, it was understood that preloading pallets or containers—unitization—so that several thousand pounds at a time could be put aboard a plane would compress the loading cycle. Shipment processing time and records control—paperwork—could be shortened by Automatic Data Processing. The combination of the two, ADP and unitization, gave promise of spectacular improvement of Air Force logistics capability.

The next step was to find a system which would work for several kinds of aircraft at many different terminals.

In 1957, the Air Force issued GOR 157 (General Operations Requirement) which detailed the needs of the Air Force for an air cargo system to take a product from source to user.

Douglas Aircraft was the successful applicant bidding on GOR 157. Douglas received a contract to set forth the equipment needed and the procedures to be followed. In the process, GOR 157 became "System 463L" or 463L.

When Douglas's final report was submitted, six areas had been clearly defined and appropriate recommendations offered.

The areas delineated were:  
The total system  
Aircraft Loading  
Shipment ground handling  
Cargo terminals  
Freight preparation  
Intransit control

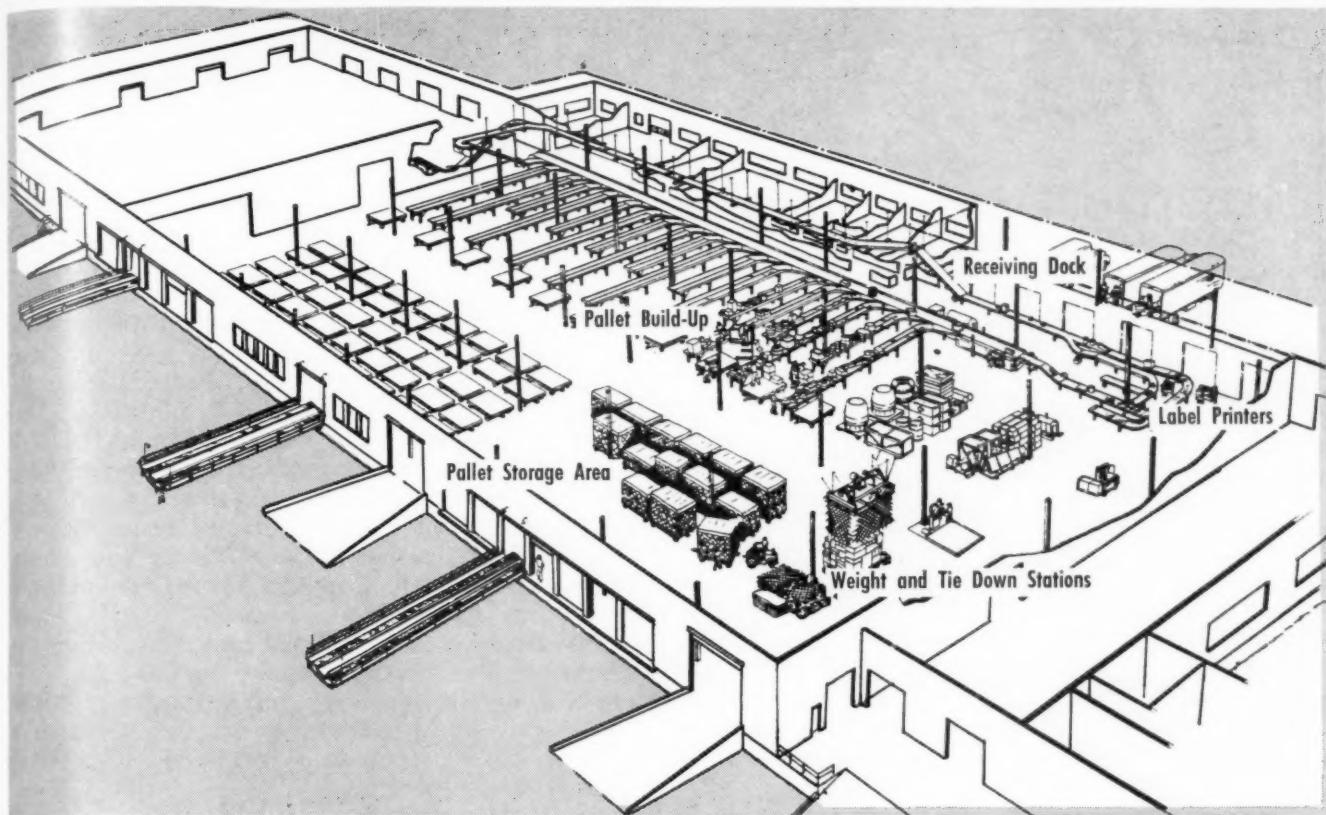
Aft  
clude  
early  
unitiz  
not a  
posab  
the u  
tion t  
Th  
ding  
the a  
termi  
will n

Simp

Ne  
mend  
was  
prob  
desti  
flight

It  
be li  
at e  
num  
poin  
Fi  
tion  
data  
form  
port  
will  
maj  
trol

JUN



ARRANGEMENT of the prototype air freight terminal to be built at Travis Air Force Base, San Francisco.

After examining the total system concept, it was concluded that unitization should be accomplished as early as possible. Douglas's recommendation was to unitize on a rigid pallet. Where a full pallet load was not available for a single destination, modular size disposable containers should be employed. This effects the unitization desired, and permits easy depalletization at enroute stations.

The next basic concept found that materials handling must be mechanized so that cargo could move to the aircraft as opposed to bringing the plane to the terminal for loading. The mobility sought for the cargo will require new equipment.

### Simplify the Priority System

Next, the priority system has to be simplified. Recommended was a two priority system. Priority One cargo was defined as that cargo which must have a high probability of leaving on the first available flight to destination or within one day if there are several flights to the desired destination.

It was further recommended that Priority One cargo be limited to one-fifth of the cargo expected to arrive at each channel during one month. Restricting the number of priorities increases the ability of an origin point to efficiently document and segregate cargo.

Finally, it was determined that a single transportation document is required to provide the necessary data and controls. The single document will be in the form of a machine readable punch card called Transportation Accounting Data card (TAD). TAD cards will be generated at Air Materiel Areas and other major sources of air cargo where effective error control procedures can be maintained.

For the aircraft loading system, a pallet size of 108- by 88-inches was adopted. This size is compatible with other modes of transportation, particularly trucks.

The master pallet is rigid. It is of aluminum alloy construction. The outer perimeter is made of extruded beams. The center part is of aluminum honeycomb with aluminum sheathing bonded to the honeycomb and extrusions by epoxy resins. Cargo tie-down rings will be included in the extruded perimeter.

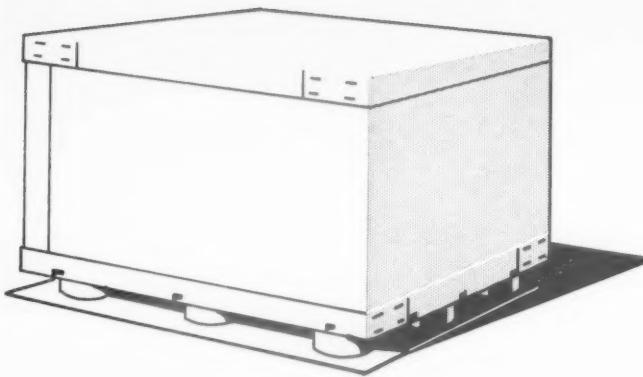
Cargo loaded on to the pallet will be secured to the pallet by a nylon net. Stacking heights on the pallet from six to ten feet will be acceptable to the net. The net will be diamond shaped and will restrain the load horizontally and vertically. The lower part of the net will incorporate quick release tie-down fittings to be used in conjunction with the tie-down rings on the pallet.

Thus, within the terminal, before there is an aircraft on the ground, freight can be sorted and unitized on a pallet and omni-directional restraint provided.

Since these pallets will go into the airplane, some modification of the plane is needed. To position and restrain the pallets within a plane, a rail-conveyor has been proposed. This amounts to two aluminum rail extrusions mounted 108 inches apart on the floor of the aircraft for the full length of the cargo compartment.

These rail extrusions have a female envelope to accept a lip designed into the outside edge of the pallet. Mating of the pallet and rails provides vertical and sideways restraint. Fore and aft restraint is provided by locks which operate through slots in the rails and engage notches in the pallet lip.

Since the Air Force has to include aerial delivery in its plans, the locks can be remotely operated. The locks



**EXPENDABLE CONTAINERS** of corrugated paper board for consolidating small shipments will be modules of the master pallet.

also have to be operable by one man even though the maximum force encountered on this lock during aerial delivery is in the order of 42,000 pounds.

Locks will be located every 40 inches along the restraint rails and notches will be provided every ten inches along the pallets to permit a large number of position selections during loading.

Between the rails, rows of roller conveyors will be mounted to give a low friction surface upon which to move the loaded pallets.

This basic system—master pallet, restraint net, and restraint rails—can be modified to accept improvement in handling equipment or modular size pallets and containers for use in short haul operations.

Since one of the principal goals of the study was to find ways to increase the utilization of aircraft, moving the cargo between the plane and the terminal came in for much attention.

In the Air Force plan, freight will be hauled from the terminal to the aircraft. The alternative was to bring the plane to the terminal where loading ramps or other such devices could be used. Under emergency conditions where large quantities of freight must be moved as rapidly as possible, loading ramps would backlog aircraft creating a bottleneck for the entire system. Furthermore, Douglas found, many areas have inadequate ramp or dock facilities.

To move freight on pallets from the terminal to the aircraft, the Air Force wants such items as 40,000-pound and 20,000-pound self-propelled mobile loading vehicles, self-elevating trailers, warehouse trailers, and modified fork lifts.

American Machine and Foundry Company is designing the needed 40,000-pound loader.

This self-propelled loader will carry four fully loaded pallets (10,000 pounds each) or five partially loaded pallets. The unit will incorporate high lift capability to mate with aircraft floor heights ranging from 40 inches to 156 inches above ground. Small motions of settling aircraft will be automatically compensated for.

The operator of the loader will be located in a cab on the left side. He will control movement of the loader floor. His cab will be capable of rising with the floor or remaining at chassis height.

Deck of the loader, 10-feet by 40-feet, will have a mechanized conveyor system of side guide rails, roller conveyors, and a pushing device. These will be retractable or removable so that the deck can be used

for carrying wheeled vehicles. In operation at the aircraft, the loader's conveyor system will push the fully loaded pallets into the plane where the aircraft's integral restraint-positioning system takes over.

The 20,000-pound loader will be a scaled down version of the 40,000-pound unit.

The 463L report does not recommend much in the way of terminal redesign. Standardization of terminal design would not accomplish much. Activity at cargo terminals varies widely.

The report believes mechanization is important, but mechanization must be tempered by the work load and the availability of inexpensive labor. Furthermore, recommendations in the report will provide a good system without substantial terminal redesign.

On the preparation of freight, 463L takes a definite stand against non-expendable containers.

"Permanent containers," the report reads, "have a place in the air logistics only when the containers serve some purpose other than for simply consolidating cargo."

Complaints against permanent containers include the weight penalty, the cube penalty, and the effort required to purchase, operate, and maintain.

Where there is a steady and even flow of traffic in both directions, and relatively stable cargo densities, then permanent containers may be practicable.

The report says expendable containers will be used to consolidate small packages and to improve stackability. The expendable containers will be modules approximately  $\frac{1}{2}$  and  $\frac{1}{4}$  the size of the master pallet. These boxes are planned as triple-walled corrugated fiber board with skids not to exceed four inches in height suitable for fork lift handling and movement by roller conveyor.

### Standardize Documents

To provide for the most effective utilization of transportation resources, air transportation documents have to be standardized to the maximum extent possible. With standardization of documents, lost or misdirected cargo and redocumentation are held to a minimum, even under emergency conditions.

Under 463L, the TAD card achieves standardization. This machine readable document is designed to perform the functions of:

- Transportation Instructions
- Label Printing
- Manifesting
- Accounting
- Reporting.

These cards will be prepared by standard key punch and verification procedures.

In the preparation, a single identification and control number should be used. For the military, the requisition number is a constant which is recognized by all elements in the logistics cycle. This number should be used for control and identification.

Each individual unit of air freight will be labeled. The label will be printed by a mechanical label printer actuated by the TAD card. The label will show complete routing instructions from consignor to consignee, requisition number, and miscellaneous information concerning weight, cube, and air priority.



at the air  
the fully  
craft's in-  
r.  
down ver-  
ch in the  
terminal  
at cargo

tant, but  
ork load  
hermore,  
a good  
a definite  
"have a  
ers serve  
olidating

clude the  
effort re-  
traffic in  
densities,  
be used  
ive stack-  
modules  
er pallet.  
ruggated  
nches in  
ovement

of trans-  
ents have  
possible.  
directed  
imum,  
dization.  
to per-

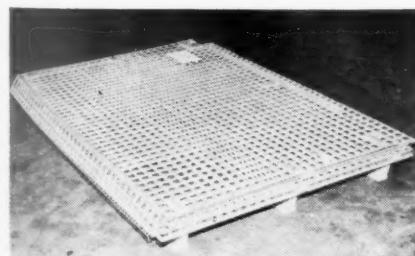
## NAL's Securitainer . . .

# An Experiment To Cut Handling

**At National Airlines, a fresh idea is readily explored in an effort to meet the costly ground handling problem connected with a mounting volume of shipments.**



ROBERT HAVENSTEIN, NAL regional cargo mgr., points out features of Securitainer.



THE CONTAINER is easily collapsed to save space when deadheading is necessary.

**F**ACED with a steadily growing volume of shipments on the New York-Florida run and the possibility of explosive growth on the new California route, National Airlines is looking feverishly for ways to cut ground handling time.

As a result, the carrier is experimenting with a collapsible, fibreglas cargo container. Robert Havenstein, NAL's regional cargo manager in New York, figures that the container will minimize handling per piece of freight.

Called Securitainer by its distributors, the unit measures 7 feet by 5 feet long and 4 feet, 8 inches high. It collapses to a height of 10½ inches and can be easily reassembled by one man in a matter of minutes.

A unique feature of Securitainer is its fibreglas latticework design which the distributors claim equals steel in endurance.

Empty weight of the container is 150 pounds. NAL's unit is mounted on a 50 pound oak wood skid.

Securitainer's 175 cubic inches of space can accommodate 2000 pounds of freight.

National has been using the container on the New York-Florida route.

Southbound, the unit is filled with late editions of the New York newspapers. Northbound, it is filled with strawberries.

Havenstein expects good long range results with the container. The fibreglas is standing up well to the wear and tear of normal handling.

In addition, Havenstein said the open latticework design results in better handling. When queried why, he explained that with this design the fork lift operator can now see what he is doing. If the cargo shifts drastically inside the container as a result of a poor grab, the fork operator can immediately take steps to adjust the load. At the same time, he can readily see whether the cargo he is lifting is of a perishable or breakable nature. The result—less damage claims.

National has also been experiencing a saving in ground handling time. In New York, Securitainer is placed right on the loading dock. The newspapers are off loaded from the delivery truck directly into the container.

At least two other airlines are expected to experiment with Securitainer.

Most likely—Seaboard & Western Airlines and Lufthansa German Airlines.

The unit was designed and manufactured by the Carl N. Beetle Plastics Corp. of Fall River, Mass. Price is \$200 F.O.B. Fall River.

The distributors, Securitainers, Inc., 30 Church Street, New York 7, N. Y., are offering users a lease plan. Under this optional plan, the container may be leased at 30¢ a day over a three year period. The fee includes insurance and maintenance. At the end of this period, the container can be purchased for a flat \$20, or as an alternative, leasing can be continued at a nominal 3¢ a day.

Meanwhile, the volume of air freight carried by National is breaking all company records.

Havenstein feels this is just the beginning. He told AIR CARGO that the blue ribbon southern transcontinental route recently awarded his carrier, will yield "untold new markets."

NAL's southern transcontinental route links Miami and California. The airline plans to inaugurate L-1049H freighter service between the two areas on June 12.

Anticipating heavy cargo volume on the new route, NAL is converting two more Super Constellations to all cargo configuration, bringing the total freighter fleet to four aircraft. The first conversion is scheduled for completion in June, the second in July.

If the new route lives up to expectations, the carrier will consider DC-7 conversions.

Havenstein thinks that it will. He feels that the air freight potential in Florida is excellent.

The key, as he sees it, is industrialization. Both Florida and the West Coast have a common bond in the electronics industry. New plants are opening up all the time. RCA now has a complete computer assembly line functioning in West Palm Beach.

Havenstein also predicts an outstanding air freight market in California for Florida's tropical fish, fruit, produce and flowers.

He is equally optimistic about the potential in California. Havenstein mentioned as especially suited to air-imports from the Far East, traffic destined to South America, cut flowers and vegetables.



*From the Cargo Files of the most experienced jetline in the West!*

## When stores need Catalina swimsuits fast, Continental "delivers the goods"

Fashion is fickle. And unpredictable. Even the most experienced buyers can find themselves short on a sudden best seller. Styles from Catalina, world's largest swimsuit manufacturer, often sell out during the first warm days of spring and early summer. Reorders flood the factories in Los Angeles and Southern California. "Ship immediately. Fastest way."

To Catalina, "fastest way" means via Continental Airlines. A fleet of Golden Jet 707s provides scheduled service daily between Los Angeles, Denver, Kansas City, Houston, El Paso, and Chicago. Between Los Angeles and Chicago alone, fifteen jets daily! Plus jet-power service to 26 major cities in the West and Southwest.

Whether you're shipping swimsuits or scientific instruments, Continental offers a variety of cargo services to meet your needs. There's ultra-fast *regular service*... Continental's exclusive, economical *coach freight* for ship-

ments from Los Angeles to Chicago...and even lower rates for *deferred cargo*, for delivery in not less than 70 hours.

Find out more about how Continental's jet schedules and rate structure can serve you. Ask your freight forwarder, local Continental Cargo Manager, or write: Mr. Lee Slay, Director, Cargo Sales, Continental Airlines, Stapleton Field, Denver 7, Colo.



AIR CARGO



*Fork lift positions a pallet for loading aboard one of Eastern's flying freighters.*

## **Eastern's Pallets And Progress**

**Plenty of cargo capacity, an aggressive sales force and the latest ground handling methods are behind the cargo comeback staged by Eastern Air Lines.**

By DONALD J. FREDERICK

**C**ARGO is coming into its own at Eastern Air Lines. Last year the airline carried 56,191,240 pounds of air freight. The quota for 1961 is a 50% increase over the 1960 total or about 85,000,000 pounds.

The man in charge of EAL's freight drive is James E. Reinke, assistant vice president and director of cargo sales. Reinke is confident that his carrier will meet and better the 1961 quota.

Since assuming EAL's cargo helm in January, Reinke has constantly strived to create an awareness of cargo at Eastern. He operates under the theory that his airline "has a lot of catching up to do."

Reinke is getting plenty of support. His advertising budget will be boosted 75% this year. His cargo sales force will be doubled.

This latter move is especially pleasing to Reinke who feels that "the first line of attack is direct solicitation in the field."

Simultaneously, an ambitious educational program has been launched by the airline. This month, the first of a series of company cargo seminars

will be held at the carrier's New York headquarters. Cargo personnel and district sales managers from all over the EAL system will attend.

These key personnel will spend two of the three weeks in an air freight office learning first hand the basic mechanics of a cargo operation.

During the third week, they will be briefed by experts in other vital areas such as: tariffs, military traffic, air express, interline cooperation, forwarders, credit, collection and accounting procedures, advertising and the total cost distribution theory.

The overall aim of the program is to impress everyone on the company's system with the importance of air freight.

Concurrently, Eastern is trying to impress field personnel with the significance of air express shipments. It is drilled home in company publications that a pound of air express yields more revenue than a pound of coach passenger and almost as much as a first class passenger. Here is the kind of breakdown which is brought to the attention of EAL field personnel.

### **Relative Yield Per Pound Air Express Versus Passenger**

	air	1st class	day coach	ex-press
EAL Market				
New York-Atlanta	28.2¢	20.6¢	26.2¢	
New York-Miami	41.9¢	28.2¢	35.8¢	

The figures are based on an average passenger weight of 200 pounds (including baggage).

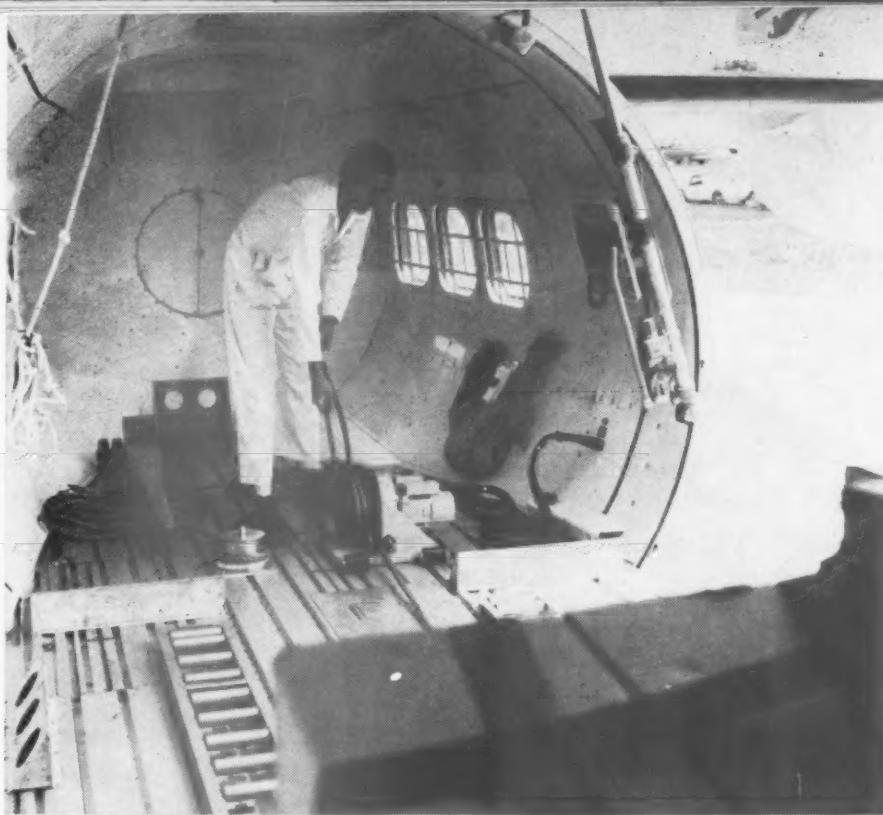
Backing EAL's renewed cargo effort are the airline's five Super Constellation freighters. These "flying freighters," with a 34,500 pound capacity, serve Houston, Mobile, Chicago, New York, New Orleans, San Juan, Miami and Atlanta.

The airline hopes to step up its flying freighter service this fall by 50% on a system wide basis.

A market study currently under way will determine what additional cities will receive freighter service. The carrier is also considering further freighter conversions.

Eastern also has its eyes on the ground. Cargo terminal facilities will be expanded in Atlanta, San Juan and

in lower  
less than  
schedules  
ight for-  
write:  
tal Air-



INSIDE THE FREIGHTER, cargo handler has no problem winching a palletized load into position, thanks to electric windlass and capstan.



LEFT, JAMES REINKE, EAL's dir. of cargo sales, and Frank Schmalzl, freight mgr. New York, discuss an outbound shipment on the floor of the Idlewild freight terminal.

Syracuse. Some additional space may be leased in Chicago and New York.

Reinke commented on Syracuse. He explained that the air freight potential in this city was virtually untapped. "The whole western part of New York state is a fast growing industrial area," he said.

The problem of moving a heavy volume of freight in and out of EAL's terminals has been solved by palletization. The theory is to cut delay on the ground to a minimum. A number of small shipments are placed on a single pallet making one large load. Handling of several smaller individual packages is thereby eliminated.

Eastern has been using wooden pallets to unitize shipments.

In a move to stay one jump ahead, Eastern, on July 1, will substitute 120 new aluminum pallets for the old wooden pallets. This decision, made

after extensive research and experimentation, represents a total investment of \$60,000.

Immediate savings are expected. Life expectancy of the old wooden pallets was 90 days. Their aluminum counterparts are expected to hold up indefinitely.

The wooden pallets were also difficult from a maintenance standpoint. The wood tended to split and damage easily. A loose nail or bolt would occasionally gouge a piece of freight or injure personnel. This problem will be eliminated by the smooth aluminum surface of the new pallets.

Frank Schmalzl, EAL's air freight manager in New York, is eagerly awaiting the aluminum pallets. He told AIR CARGO that the new pallets mean substantial weight savings to his carrier. Schmalzl pointed out that the wooden pallet now in use weighs 300 pounds.

The aluminum unit will tip the scales at 120 pounds. To Schmalzl, the 180 pound saving means just that much more freight aboard the "flying freighters."

The transition to the aluminum pallets presents no problem. Upon delivery, they will be parceled out to the carrier's eight "flying freighter" cities.

Pallets will be kept rotating throughout the system by placing a minimum of five on each freighter trip, whether the aircraft is loaded or not. Eastern's freighters can hold seven of the pallets.

Operationally there will be no change. The aluminum pallets will be groundhandled in the same manner as the wooden.

The pallets, which measure 7½ feet by 6½ feet by 4½ inches, hold about 4000 pounds of freight. They are loaded according to destination. A manifest is kept on each unit. Airwaybill, number of pieces and total weight are recorded according to pallet.

When maximum weight or height is reached, a restraining net is thrown over the load. This net is secured by straps which hook to rings on the base of the pallet.

Once loaded, the pallet is ready for the trip to the freighter on the fork lift truck.

The fork lift places the pallet in the aircraft. A loaded pallet has no problem clearing the freighter's spacious doors which measure 106 by 74 inches.

Inside the freighter, the pallet is lowered onto two parallel tracks of aluminum rollers.

A portable electric windlass and capstan positions the pallet at the desired location inside the aircraft. Whenever possible, pallets are positioned in the aircraft according to destination. Thus the pallet which is to be offloaded first goes on the aircraft last.

The pallets are secured to the tracks by heavy duty canvas straps which fit over the entire load and fasten to rings on the aircraft floor.

This system of palletization enables Eastern to load an entire freighter in 45 minutes. Schmalzl estimates that an hour and a half of ground handling time is saved on each freighter flight.

As a side benefit, the pallets have cut down on pilferage. Individual pieces of freight are secured to the pallet inside the terminal under close supervision.

Eastern takes every possible precaution to assure arrival of an undamaged shipment. In stormy weather, the pallets are carefully shrouded with plastic covers on their trip to the aircraft.

As an added convenience to the shipper, EAL has introduced a reserved air freight plan. Space for a shipment can be reserved on Eastern's freighters at no extra cost.

to the scales  
1,000 lb., the 180  
that much  
the "flying

minimum pallet.  
Upon delivery  
out to the  
"fatter" cities,  
throughout  
a minimum  
trip, whether  
it's Eastern's  
pallets.  
will be no  
pallets will  
be in the same manner

are 7½ feet  
high and hold about  
They are  
dimension, a  
unit. Airway  
total weight  
in pallet.

or height  
g net is  
s net is se  
ook to rings

is ready for  
on the fork

pallet in the  
is no prob  
s spacious  
74 inches.  
the pallet is  
tracks of

and glass and  
at the de  
raft. When  
positioned in  
destination.  
to be off  
raft last.  
to the tracks  
s which fit  
ten to rings

on enables  
freighter in  
tes that an  
d handling  
ghter flight.  
pallets have  
Individual  
red to the  
under close

ossible pre  
an undam  
weather, the  
l with plas  
the aircraft.  
ce to the  
duced a re  
space for a  
n Eastern's

AIR CARGO

# Nuclear

## Materials

### Need Speed Of Air

**Extreme density and  
packaging care make these  
products good shipments**

by Warren H. Donnelly

Director, Technical Services Division  
U.S. Atomic Energy Commission  
New York Operations Office

*The opinions expressed by Mr. Donnelly  
in this article are his own and should not  
be considered as the official position of the  
Atomic Energy Commission.*

**N**UCLEAR FUEL MATERIALS are taking an important place in the growing list of items moving as air freight. The materials include normal uranium, the isotopes of uranium—uranium 233 (U-233) and uranium 235 (U-235), and plutonium.

Normal uranium is a very heavy, hard material extracted from ore. U-233, U-235, and plutonium are artificial materials manufactured by the nuclear energy industry. Of the quartet, normal uranium and U-235 make up most of the shipments which may be in metallic or powder form or fabricated nuclear fuel.

Shipments may be domestic or international. International shipments are exports to friendly nations which have signed agreements with the United States for cooperation in nuclear development.

As the U.S. and various European countries approach the goal of economic nuclear power, an increasing amount of nuclear products will require air transportation.

The nature of these products make shipment by air the ideal form of transport. The handling of these shipments is much the same as for other commodities, but there are a few real differences which should be understood to assure the greatest realization of the advantages of air transportation.

Normal uranium metal is priced at about \$5 a pound. Fuel fabricated from normal uranium is priced quite a bit higher. Fabricated fuels are largely solids with hardware (fittings to facilitate manipulation) made of stainless steel, aluminum or zirconium.

There is almost no standardization of nuclear fuel elements. The lack of standardization plus the high unit cost

of each fuel element makes it uneconomical to build up and maintain central inventories of fabricated fuel for the ready supply of nuclear power plants.

In addition, nuclear fuel fabricators must pay the government a use charge of four percent per year of the value of U-235 held by the fabricator.

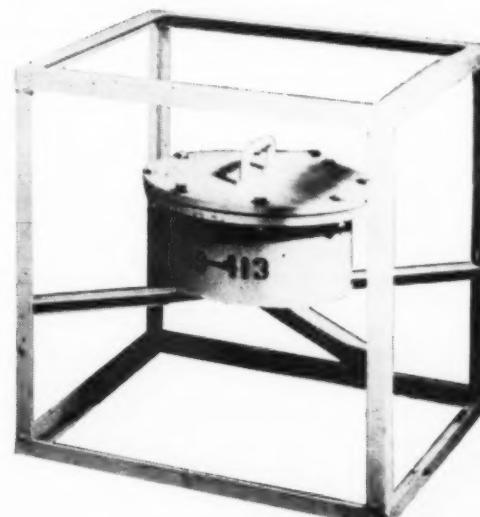
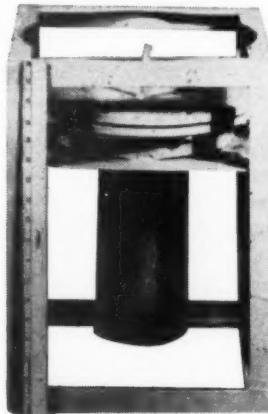
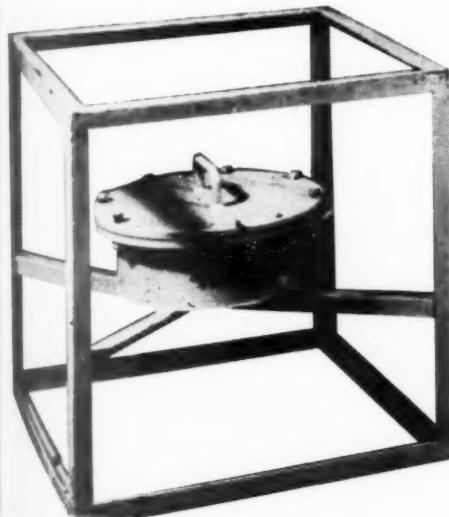
Thus, fuel elements are produced when needed and shipped by the fastest form of transportation available.

It is universally known that nuclear fuels are an extraordinarily compact source of energy. One pound of U-235 when consumed in a nuclear power plant produces heat equivalent to that from burning 1,500 tons of coal.

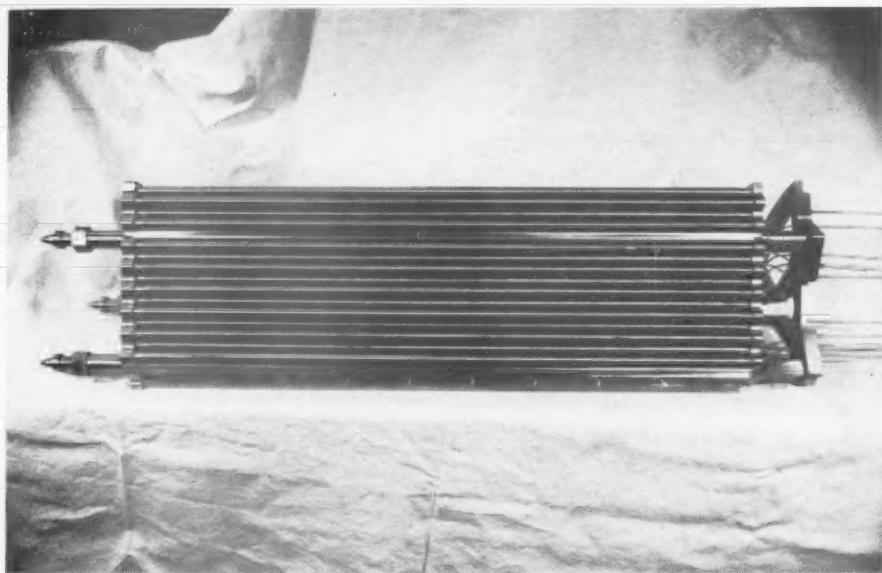
The fact that some nuclear materials are used in atomic weapons plus the fact that some people know little or are misinformed about these materials has given rise to some misgivings. However, nuclear materials have been moved safely about the country since 1944. The requirements for packaging and shipping these materials have been designed to assure safe commercial movements.

When Congress passed the Atomic Energy Act of 1946, the demonstrations at Hiroshima and Nagasaki had not been forgotten. What U-235 and plutonium could do when used in weapons was no secret.

Thus, Congress decided that the possession, use, and movement of nuclear materials should be regulated to protect the public and foreign nations against the possible consequences of ill-advised or clandestine use of nuclear materials. Congress made the federal government the exclusive owner of all uranium and plutonium within the U.S., and forbade possession of these



POSITIVE SEPARATION of the contents of one package from another is assured by the angle iron cage.



THE TREMENDOUS ENERGY content of nuclear fuel is illustrated by this photograph of a fuel bundle from the PM-1, portable nuclear power plant being built by the Martin Company. This is one of six bundles that make up the plant's entire fuel loading. Six of these bundles can provide the fuel for at least a year's uninterrupted operation. Each of the 129 rods in the bundle contains 40 grams of U-235. When this U-235 is completely burned up the energy produced is equal to that from 21,200 gallons of oil per rod.

materials except under license. Later, in 1954, restrictions were relaxed to permit private ownership of normal uranium, but the government still holds title to, and closely controls, all enriched uranium and plutonium within the country.

Nuclear materials are packaged with great care. The Atomic Energy Commission, the Interstate Commerce Commission, the Federal Aviation Agency, and the Civil Aeronautics Board, all have an interest in seeing that the packaging of nuclear materials includes all necessary safeguards.

### Radioactivity No Problem

The fact that nuclear products are slightly radioactive poses no obstacle. Radioactive products—radio-iodine, radio-cobalt, and other radio-isotopes—have been moving safely by air freight for a long time. The packaging requirement assures protection against any radioactivity of the materials shipped.

Plutonium is also a poison. Again, poisons of many kinds move by air. They are no problem when properly packed and adequately marked.

Some of the nuclear items—U-235, U-233, or plutonium—if brought together in sufficient quantities under certain conditions can "go critical," in other words, start a nuclear chain reaction.

Although nuclear chain reactions are difficult to set up, even under laboratory conditions, the regulations for shipping these materials preclude against the chance that enough material might be brought together to

permit a small chain reaction.

Safeguards provided by the regulations covering the movement of nuclear products require sealed containers for some shipments; limit the amount of U-235, U-233, or plutonium which may go into a single container; and demand packages designed to provide minimum separation from the contents of adjacent packages.

The separation for some small shipments is done by surrounding the container by a framework of angle iron, called a birdcage. Larger shipments may require the material to be sealed in a container which is then suspended within a drum or crate to assure separation.

The regulations require approval of individual containers for larger shipments of U-235 and plutonium. Such approval is needed for packages containing more than 0.5 kilograms of U-235 or 0.35 kilograms of plutonium. These amounts are less than the quantity which can be made to "go critical" under ideal laboratory conditions.

The regulations may also limit the number of containers of nuclear products which may be put aboard a single airplane.

Throughout, a shipment of nuclear products is under close scrutiny of the government. For international shipments, representatives of the nations involved generally meet at the airport of embarkation to formally complete the transfer of ownership. Since the material is government owned, no export license is required. Instead, AEC certifies to the export control unit of Customs that the outgoing material is government property.

Although the materials are federally owned and controlled, more and more local authorities are becoming interested in the movement of nuclear products. Shipments of U-235 (0.5 kilos) or plutonium (0.35 kilos) which must move through the streets of New York to reach the airport are subject to the City's requirements for advance notice to the Office of Radiation Control.

The Port of New York Authority also imposes some restrictions on the passage of these materials through Port Authority facilities, and limits movement of larger shipments to bridges. The Triboro Bridge and Tunnel Authority forbids the use of its bridges and tunnels because of a temporary difficulty in obtaining bridge and tunnel insurance.

Elsewhere, shipments large enough to require a truck to carry an identifying ICC placard can expect attention. While local regulations do not affect the movement of nuclear cargo once it has reached planeside, such regulations can affect the deliveries to and from airports.

An awareness of these regulations is important. Otherwise, missed flights or delays in deliveries can result.

### 60 Shipments From New York

During 1960, there were 60 some shipments exported through New York alone. Other export shipments were routed through Miami and San Francisco. Some of the shipments involved only small amounts of nuclear materials, such as a few grams of U-235 in a fission counter tube destined for a laboratory overseas. Some were fabricated products, such as the shipment of a complete core for a nuclear reactor for the Technische Hochschule at Munich, Germany. Some were unfabricated materials for experimental use, such as those which went to France.

Regardless of where it is going or what it is, the weight per cubic foot of these shipments is unusually high in comparison with other cargo. Both uranium and plutonium are dense substances weighing slightly more than lead. Because of this density, freight handlers must be careful or they will find themselves trying to lift a 40 pound shipment with 10 pounds of effort. Strained muscles or a dropped shipment may result.

Strained muscles make unhappy cargo handlers. Dropped or delayed shipments make unhappy customers. Nobody wants either. Neither will come about if the regulations are understood, and nuclear shipments, no matter how small, are treated as though they were heavy.

A  
Japan  
by  
com  
piled  
to de  
existin  
The  
analys  
modifi  
Japan  
1958,  
poten  
(or 3  
repre  
modifi  
tions  
value  
This  
in ter  
of tra  
in the  
By  
cargo  
Japan  
175 r  
miles.  
In th  
between  
proxim  
repre  
ton-m  
cargo  
at \$1  
Base  
It  
the a  
criter  
In p  
deter  
poten  
An  
ship  
ing c  
and

are federally  
and more  
coming in  
of nuclear  
U-235 (0.5  
kilos) which  
sheets of New  
are subject  
for advance  
radiation Con-

uthority also  
on the pas-  
through Port  
mits move-  
to bridges.  
Tunnel Au-  
its bridges  
temporary  
bridge and

large enough  
an identify-  
et attention.  
not affect  
cargo once  
uch regula-  
ries to and  
egulations is  
ed flights or  
ult.

## New York

re 60 some  
New York  
ments were  
San Fran-  
ents involved  
nuclear ma-  
s of U-235  
destined for  
ome were  
as the ship-  
or a nuclear  
che Hech-  
any. Some  
als for ex-  
those which

is going or  
cubic foot  
usually high  
cargo. Both  
dense sub-  
more than  
ity, freight  
or they will  
lift a 40  
pounds of  
a dropped

the unhappy  
or delayed  
customers.  
er will come  
are under-  
ments, no  
d as though

AIR CARGO

# U.S.-Japan Air Cargo Due To Rise

**Canadair study finds a big potential between  
the two countries based only on value of commodities**

by ANTHONY VANDYK

**A**BIG BOOM IN AIR CARGO between the United States and Japan is forecast in a study prepared by Canadair Limited. The Montreal company's 320-page study was compiled by the sales research department to determine the air cargo potential existing in U.S.-Japan trade.

The study shows that based on the analysis of value per pound of commodities moving between the U.S. and Japan, there existed in this trade in 1958, an annual volume of air cargo potential of some 83 million pounds (or 332 million ton-miles). This volume represents the total weight of commodities moving between the two nations in 1958 which had an average value of \$1.75 per pound and over. This volume also represents some 0.3%, in terms of weight, of the total volume of trade between the U.S. and Japan in that year.

By 1965, the annual volume of air cargo potential between the U.S. and Japan will amount to approximately 175 million pounds or 701 million ton-miles, according to the Canadair study. In that year, the ton-miles performed between the U.S. and Japan will approximate 381 million ton-miles. This represents approximately 54% of the ton-mile equivalent of the 1965 air cargo potential of commodities valued at \$1.75 per pound and over.

## Based On Value Alone

It should be noted that, in making the above initial estimates, only one criterion was used—value per pound. In practice, other factors will also be determinants of a commodity's air potentiality.

Among such factors are the relationship between air and surface packaging costs, the relationship between air and surface insurance costs, the exist-

## UNITED STATES - JAPAN AIR CARGO POTENTIAL—1958-1965 AND ACTUAL AIR CARGO TRAFFIC 1953-1959 WITH A FORECAST 1960-1965.

YEAR	Air Cargo Potential (Volume of Commodities Above Value of \$1.75 per pound)				Air Cargo—Actual and Forecast—United States—Japan					
	East Bound (Japan 'U.S. To To U.S.) Japan)		Total (Thousands of Pounds)	Equivalent Ton-Miles	East Bound (Japan 'U.S. To To U.S.) Japan)		Total (Thousands of Pounds)	Ton Miles	% Change from Previous Year	Col. 9 Total as % of Col. 5 Total
	Thousands of Pounds)	Thousands of Pounds)			Thousands of Pounds)	Thousands of Pounds)				
<b>ACTUAL</b>										
1953					629	1,025	1,654	6,617,654		
1954					868	1,078	1,946	7,785,946	+18	
1955					1,268	1,193	2,461	9,846,461	+26	
1956					1,666	1,533	3,199	12,799,199	+30	
1957					1,987	1,974	3,961	15,847,961	+24	
1958	34,749	48,297	83,046	332,267,046	2,631	1,901	4,532	18,132,532	+14	5
1959	53,616	53,811	107,427	429,815,427	3,555	3,124	6,679	26,722,679	+47	6
<b>FORECAST</b>										
1960	60,680	76,442	137,322	549,425,322	4,863	4,488	9,351	37,413,351	+40	7
1961	63,714	80,474	144,188	576,896,188	7,294	6,733	14,027	56,122,027	+50	10
1962	66,900	84,497	151,397	605,739,397	13,859	12,792	26,651	106,630,651	+90	18
1963	70,245	88,722	158,967	636,026,967	23,560	21,747	45,307	181,273,307	+70	29
1964	73,757	93,158	166,915	667,826,915	35,340	32,621	67,961	271,911,961	+50	41
1965	77,445	97,816	175,261	701,219,261	49,475	45,670	95,145	380,675,145	+40	54

ence of inventory and warehousing problems, the existence of breakage and pilferage problems, the level of existing surface freight rates and the importance of speed in delivery. Hence being based on the criterion of value per pound alone, the Canadair survey necessarily represents only an initial estimate.

As the accompanying tables show, the present air cargo rates are far greater than the cost of moving the same cargo by sea. While the introduction of modern economical cargo aircraft will allow air carriers to reduce their rates considerably, Canadair does not feel that air cargo rates can generally be brought into direct competition with ocean freight rates in the foreseeable future.

Nonetheless, assuming the ratio of indirect costs to direct costs from all-cargo operation in the U.S.-Japan trade

is 100%, the operator of a modern economical all-cargo aircraft, in order to realize a 20% profit at a 60% load factor, will need to charge an average rate of only 19 cents per ton-mile, according to Canadair.

## Rates A Small Factor

However, Canadair reiterates that a direct comparison of freight rates does not present a true picture of the comparative cost to a shipper of moving a commodity between two points by sea and air. This is particularly true, the company points out, when the commodities, because of the length of haul involved, remain in-transit for an extended period, as is the case of goods moving by surface between the U.S. and Japan.

There must therefore be taken into consideration factors such as inventory



# MIAMI FASTEAST TO BOGOTA COLOMBIA



Ship via domestic airlines and specify "AVIANCA FROM MIAMI." You get fastest Jet service on big Boeing 707s, expert handling on the Shortest Route to South America. Also Constellation flights Miami-Barranquilla-Medellin-Bogota. Immediate connections to Caracas, Quito, Lima. Shipments collect to Colombia payable in local currency.

Call Your Forwarder or

# AVIANCA

6 West 49th St., New York 20  
JU 6-5210  
309 E. Flagler St., Miami 32  
NE 3-2491

## Comparison of Actual Freight Costs by Sea & Air TOKYO TO NEW YORK

Commodity	Description	Av. No. of Published Cubic ft. per 100 lbs.	Published Rate per Cubic ft.	Published Rate per 100 lbs.	Steamship cost per 100 lbs.	Actual Steamship freight cost per 100 lbs.	Current air freight rate per 100 lbs.
Zirconium Metal (1)		...	1.35	2.70	6.75	\$17.10	\$169.00(3)
Silk Scarves		5	1.35	2.70	6.75	137.00	
Cameras val. over \$10.00 ea.		4.65	1.37	2.79	6.36	169.00(3)	
Raw Silk, in Skeins (2)		...		9.50	9.50	137.00	
Silk Fabrics, dyed over 30" wide		5	1.35	2.70	6.75	137.00	
Silk wearing apparel		5.2	1.35	2.70	7.02	137.00	
Wool outer wear nspf.		5.2	1.35	2.70	7.02	137.00	
Wool Sweaters		5.2	1.35	2.70	7.02	137.00	
Silk Fabric nes.		5	1.35	2.70	6.75	137.00	
Furs, nes., undressed		7.45	1.35	2.70	10.06	169.00(3)	
Radio Apparatus		9.4	1.47	2.94	13.82	169.00(3)	
Wool Fabrics, 10-12 ozs./sq. yd.		10.65	1.35	2.70	14.38	137.00	
Fish liver oils		2.5	.81	1.63	2.03	169.00(3)	
Gloves, leather		6.65	1.72	3.44	11.44	169.00(3)	
Telescopes, over \$2.00 each		8.25	1.35	2.70	11.14	169.00(3)	

(1) No weight or measurement rate is published. (Average value per pound is \$8.85. Steamship rate is 2% of value.)

(2) Only weight rate published.

(3) General Commodity Air-Cargo rate for shipments weighing 100-549 lbs.

costs, obsolescence, and fluctuations in demand, all of which are attributable to the element of time. It is axiomatic that air cargo carriers in this trade are today competing with surface carriers on the basis of the speed advantage of air transportation, and, although new and faster aircraft will reduce the flying time between the two points, it is not expected that this reduction in flying time will attract much additional traffic away from the surface carriers, Canadair says.

(important for perishables, fashion goods, emergency shipments, etc.), but that fast delivery can also enable shippers to reduce or eliminate other of their "pipeline" distribution costs—e.g. reduce time in which capital is tied up in inventory, etc.

Canadair asserts that significant penetration of the surface cargo carriers' market will thus partly depend upon the ability of the air cargo carrier to convince shippers that the speed advantages offered by air make it good business to ship by that medium at a rate higher than the surface rate, partly upon the ability of the air carrier to determine accurately the other costs of distribution, such as insurance, inland freight, wharfage, documentation, warehousing, etc.; and partly upon the ability of the air carrier to assess the extent to which these costs influence the shipper in his choice of transportation medium.

## Airlines Must Sell

Therefore, if significant penetration of the surface cargo carriers' market by the air cargo carriers is to be made on the basis of the speed advantages which air possesses, the air carrier must make potential shippers aware that speed possesses not only the advantage of allowing reduced in-transit time

## Comparison of Actual Freight Costs by Sea & Air NEW YORK TO TOKYO

Commodity	Description	Av. No. of Published Cubic ft. per 100 lbs.	Published Rate per Cubic ft.	Published Rate per 100 lbs.	Steamship cost per 100 lbs.	Actual Steamship freight cost per 100 lbs.	Current air freight rate per 100 lbs.
Bookkeeping & Accounting Machines		7.5	1.93	3.85	\$14.48	\$169.00	
Electronic Computers		7.5	1.93	3.85	14.48	169.00	
Motion Picture Film		2.8	2.02	4.04	5.66	169.00	
Card Punch & Aux. Machines & Equip.		7.5	1.93	3.85	14.48	169.00	
Research & Lab. App. & Equip. nec.		12.5	1.93	3.85	24.13	169.00	
Recorders, (tape, wire, disc, etc.)		4.5	1.40	2.80	6.30	169.00	
Generator sets, steam turbine		22.4	1.93	3.85	43.23	169.00	
Test & measure Instruments nec.		12.8	1.93	3.85	24.70	169.00	
Industrial Recording Instruments		4.5	1.93	3.85	8.69	169.00	
Textile Machinery & Parts		3.8	1.93	3.85	7.33	169.00	
Switchboards & Panels		4.9	1.40	2.80	6.86	169.00	
Pumps, Turbine		3.8	1.40	2.80	5.32	169.00	
T.V. Studio Equipment		9.4	1.93	3.85	18.14	169.00	
Electric Heating Units & Devices		11.4	1.93	3.85	22.00	169.00	
Gear Cutting Machines & Parts		4.1	1.40	2.80	5.74	169.00	



rejected. The page is usually distributed to all tariff users, both carrier employees and the public. Unless the airline issues a revision in lieu of the rejected page, the tariff subscribers are unaware of a rejection.

An expensive comedy of errors sometimes ensues.

The airlines contend that efforts "have been made partially to alleviate these difficulties by filing tariff material, which they have reason to believe might be invalid as to form or content, on sixty or even ninety days prior to public notice, in order to reserve sufficient time to take corrective action prior to the effective date of the tariff material, in the event the Board should deem rejection necessary."

"Unfortunately," the carriers observe, "such advance filings have not accomplished this purpose. Rejection notices even under such circumstances, are issued within a few days of the effective date. Thus, nothing more has been accomplished by such advance filings than would have been accomplished on a regular statutory thirty-day filing. These rejections are concerned with the form of tariff matter and not with the lawfulness of its substance."

The airlines see no reason why the

tariff section should not make up its mind within thirty days of the date of filing, "irrespective of the effective date."

Remedy proposed by the airlines is for the tariff section to handle a rejection in the same manner as it presently handles suspensions.

In the case of a suspended tariff, the Board investigates. While the tariff is under investigation, the suspended rate, fare, or rule is without any force or effect. If at the end of the probe, the board finds adversely, the rate is cancelled without ever having become effective. Suspension in such a case amounts to the same things as rejection.

### Spare The Material

As the airlines see it, the advantage in such a procedure is that the offending rule, fare or rate does not effect other material on the page. Validity of the page is preserved even though a portion has become inoperative, and might never become effective.

The airlines relate the second source of trouble—proper exercise of judgment—to review procedure. They advance the premise that no human being is infallible, particularly when the exercise of judgment or discretion is involved.

Cited as especially annoying are the occasions when the tariff section denies a filing without issuing what the airline feels are appropriate or convincing reasons. In some cases, the airline bows to the Board's tariff section when the matter is relatively unimportant or time is short.

Denial by the tariff section is subject to review by the Board. But it is pointed out that review is a slow process. In addition, that is no provision which allows the applicant to present his side of the case to the Board.

Finally, and often very irritating to the airlines are trivial matters which may be costly or frustrating, but of such a nature as not to warrant a full blown presentation to the Board.

To counteract this situation, the airlines propose some form of review procedure, short of review by the Board. This review would be at a high staff level, but would be expedited and informal.

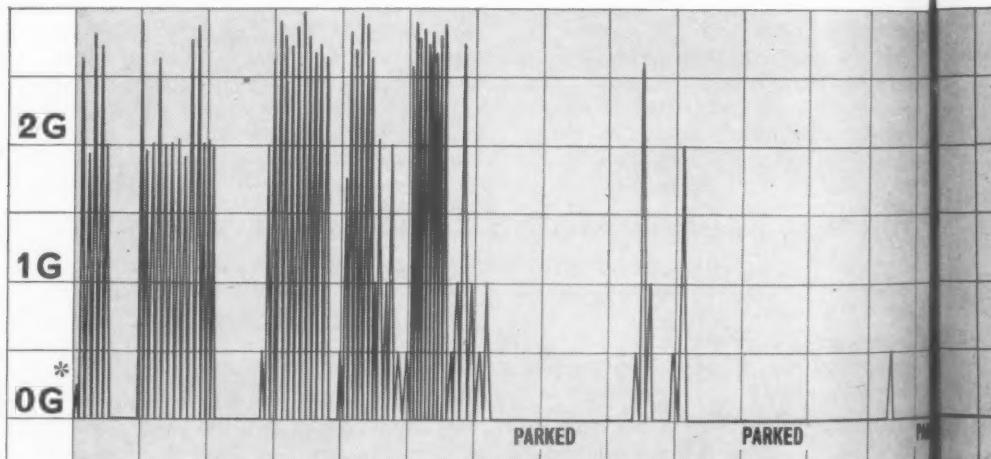
The applicant would be permitted to make an oral presentation and to hear and answer the contentions of the tariffs section.

To implement this review procedure, the chief of the tariff section, upon rejecting a tariff filing or denying a special application, would specify in writing the reasons for his actions.

*RCA's recording  
of a New Jersey-  
to-Sweden shipment  
tells the smooth  
"inside" story of  
Clipper Cargo handling*

What you see here is the story of the complete journey of a DC7F all-cargo Clipper shipment from RCA in Gloucester, N. J. to a bank in Stockholm, Sweden.

Unknown to Pan Am, an impact recorder was "planted" within the shipment, registering every bump and vibration. That's what those jiggles are. This was the first



LOCAL DELIVERY TO IDLEWILD

RCA 501 all-transistor computer system ever sent to Europe. Value: \$700,000. RCA wanted to be sure it was handled with care.

What's more, RCA wanted to prove that Clipper Cargo is a smooth, practical way of shipping. Their own recording showed it. As you can see, the all-cargo flight itself

ying are the  
ction denies  
that the air-  
or convincing  
, the airline  
ection when  
important or

tion is sub-  
d. But it is  
a slow proc-  
no provision  
t to present  
Board.

irritating to  
tters which  
ing, but of  
arrant a full  
Board.

tion, the air-  
review pro-  
the Board.  
a high staff  
edious and

be permitted  
ion and to  
tions of the

procedure,  
ction, upon  
denying a  
specify in  
his actions,

backing up these reasons with facts.

The matter would then be turned over to the "high staff level." The airlines feel that the director of the Bureau of Air Operations is the person best qualified to handle the review procedure. If the director were not available, an associate director or assistant director of the Bureau would alternate.

Underscoring the airline petition is a call for basic "canons of interpretation." These would be yardsticks to guide the drafters of tariffs and the Board's staff in the interpretation and application of the rules in these tariffs.

Now even the experts are confused. As one airline attorney remarked: "It is hardly worth the fee. Dealing with tariffs at CAB is the most frustrating experience in our practice. I would rather tackle the Central Intelligence Agency."

### CAB Reorganization Plan Sent To Congress

A reorganization plan designed to streamline Civil Aeronautics Board's procedures has been submitted to Congress by President Kennedy. The plan would allow individual Board members, hearing examiners, Board employees or groups of employees rather than the

five-man Board to act on certain regulatory and adjudicatory matters.

Under the reorganization, which becomes effective if neither house of Congress objects within 60 days, the full Board still would be entitled to review any action. The move was described by Kennedy as giving "greater flexibility in the handling of the business before the Board and permitting its disposition at different levels so as to better promote its efficient dispatch." The change would allow matters, "depending upon their importance and their complexity, (to) be finally consummated by divisions of the Board, individual Board members, hearing examiner and . . . by other employees" with the latter subject to the protective provisions of the Administrative Procedure Act.

Purpose of the move is to relieve Board members of the necessity of dealing with matters of lesser importance. Presidential advisor James M. Landis had urged such a move last fall and, upon taking office as chairman of the Board, Alan Boyd also supported it.

The President's message said the Board has the right to review any decision, report or certification covered either on its own initiative or upon the petition of any party or intervenor

showing the necessity for such review. If the review is denied, the decision of the lower echelon or party becomes final. The President said provision is made to continue the fundamental bipartisan concept of the Board by providing for review upon vote of a majority of the Board less one member. Delegation of the authority is to be made by the chairman who is to receive a transfer of functions from the Board.

### More Time To Pay Bills Proposed For Forwarders

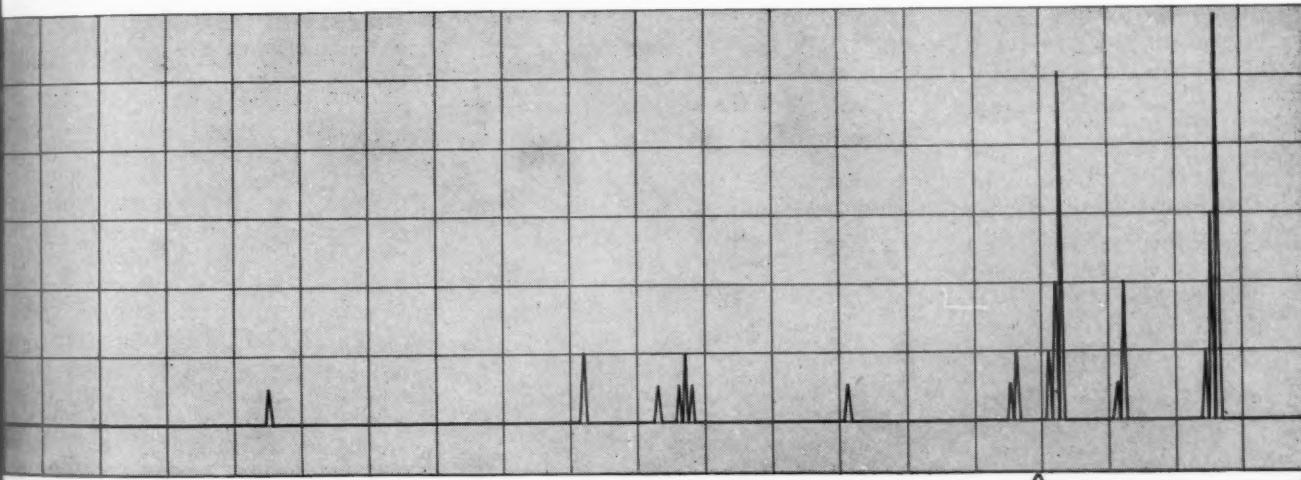
There is a good chance that the present time limits within which the air freight forwarders must pay their transportation charges to the airlines will be changed. The changes are embodied in Civil Aeronautics Board's notice of proposed rulemaking to amend Part 296 of the economic regulations. Docket is No. 11509.

The Board proposal would effect both domestic and international air freight forwarders.

The domestic forwarders have seven days in which to pay transportation charges to the airlines. CAB is proposing an increase to 21 days.

Billing dates for the international forwarders would be brought into line

## oves Pan Am "Handles with Care"



BY PAN AM TO STOCKHOLM

LOCAL DELIVERY TO SVERIGES KREDITBANK

#### \* What's a G?

A measure of force in which a moving body meets a reacting force equal to its own weight. Example: the vibration you feel when walking is approximately equal to 1 G.

†Trade Mark, Reg. U. S. Pat. Off.



ever sent to  
sure it was  
CA was so impressed they showed Pan Am the  
recording.

is a good case to keep in mind when you have an over-  
as shipment demanding special care. Call your cargo  
gent, freight forwarder or Pan Am first thing.

JUNE, 1961

**When you need a  
shipment in a hurry...**



## **Delta Jet Freight**

Your shipments move faster when you use Delta's big Jets, cruising at speeds up to 615 mph. And all Delta flights carry Air Freight, give you next day delivery. Delta's fleet also includes all-cargo aircraft for heavier, bulkier shipments.

**Delta DC-8 and  
Convair 880  
Jet Routes**



For information or service call your nearest Delta office, or write: Delta Cargo Dept., Airport, Atlanta, Ga.

**DELTA**  
the air line with the **BIG JETS**

with the domestic. This would mean a reduction from the international forwarders' present 30 day cut off to 21 days.

CAB explained that it took the necessary steps to make the period within which international freight forwarders must pay their transportation charges the same as that which applies to domestic forwarders, "because there appears to be no substantial difference between the administrative problems of domestic and international forwarders."

In line with its proposal, CAB would require both airlines and forwarders to file statements in their tariffs of billing intervals, the period covered by each billing, the time within which bills are payable, and any charges for late payment.

### **Amended Permit Voted To Aeronaves de Mexico**

An amended foreign air carrier permit has been granted to Aeronaves de Mexico, S.A., by the Civil Aeronautics Board. The permit authorizes a route between (a) Mexico City, Washington, D.C. and New York; (b) Mazatlan, Torreon, and Monterrey, Mexico, and San Antonio, Tex., via intermediate points in Mexico; and (c) Hermosillo, Mexico and Tucson, Ariz., via intermediates in Mexico.

Action was deferred on Aeronaves' request for authority to serve a segment beyond New York to Europe.

### **Fiscal '62 Subsidy Estimated At \$84 Million**

Total subsidy for air carrier operations was estimated at \$84,324,000 for fiscal 1962 in the Civil Aeronautics Board's 10th annual report. Bulk of this amount is earmarked for local service and helicopter airlines.

The Board estimated that \$1 million would be spent on the development of new routes for local service airlines.

In the report, the Board noted that the Post Office had indicated an increase in the nonpriority mail by air program. CAB estimated a total of 78,364,000 nonpriority mail ton-miles.

A gradual implementation in the mail program is expected with the first phase resulting in added volume of about 45 million annual mail ton miles or about \$7.5 million based on current rates.

The Post Office anticipates that the volume of nonpriority mail transported by domestic airlines in fiscal 1962 will exceed by approximately 55% the volume carried in fiscal 1960. The increased volume will be carried primarily by nonsubsidized carriers.

A shi  
was re  
Trinidad  
AIRWA  
to the  
demon  
in adva  
general  
machine

The  
flight in  
atlantic  
10,000  
carrier's  
dicted  
the Fr  
50% be

As a  
AIR L  
take he  
rates o  
they tr  
the sa  
baggage  
minal.

The  
man to  
senger  
rate. I

\* F  
se

FE  
Estab  
of 49  
shipp

JUNE,

# Carrier Round-Up

A shipment of 108 voting machines was recently flown from Miami to Trinidad by PAN AMERICAN WORLD AIRWAYS. The machines were flown to the islands of Trinidad-Tobago for demonstration and education purposes in advance of the islands' forthcoming general elections in September. Each machine weighed 525 pounds.

The addition of a Boeing 707 jet flight increased AIR FRANCE'S transatlantic cargo capacity last month by 10,000 pounds. David W. Delaney, the carrier's eastern regional manager, predicted the new flight would increase the French airline's cargo traffic by 50% between New York and Paris.

As an added convenience, UNITED AIR LINES now permits salesmen to take heavy sample cases at air freight rates on the same plane on which they travel. Previously UAL accepted the sample cases and heavy-weight baggage only at the air freight terminal.

The new service permits the salesman to check-in his case at the passenger terminal, paying the air freight rate. He is thus spared the incon-

venience of going to the air freight terminal to check-in or receive his case. The service is applicable at all system points west of Denver.

UAL noted that the salesman, in particular, would benefit from the new policy, but added that the service is available to all passengers.

Ten tons of electronic equipment have been successfully moved from Seattle to New York by the FLYING TIGER LINE. The shipment, flown for Tektronix Inc., was described by FTL officials as one of the largest and most valuable air cargos ever moved out of the Portland terminal.

Meanwhile, Dave Gardner, FTL's station manager at Midway airport, reports that his carrier has moved up to third place in total pickup and delivery traffic in Chicago air freight.

Commented Gardner: "We have shown this gain in the past 18 months and we think it represents a very good improvement in view of the great amount of short-haul traffic which goes to the other lines and which is not available to us due to the long-haul characteristics of our service. In long-

haul business, I believe we are probably at the top of the pile."

IRISH AIRLINES, in the year ended March 31, 1961, carried almost 300 tons of freight and mail across the Atlantic—more than double the amount carried in 1959/60. During the same period, the airline flew almost 14,000 tons of freight and mail on European routes compared with the 10,435 tons carried in the 1959/60 period.

TRANS-AIR SYSTEM is in the midst of an accelerated expansion program. The New York based international air freight forwarder has opened new offices in Chicago and Miami and is expanding facilities near New York International Airport. In addition, a west coast office will be opened soon. The firm is anticipating over \$2 million in business this year.

A new March industry record for domestic scheduled air freight volume has been claimed by AMERICAN AIRLINES. During March, the airline flew 10,243,000 ton miles for a 10% increase over the same month in 1960.

AA established company records in

## FITS LIKE YOUR OWN SHOE

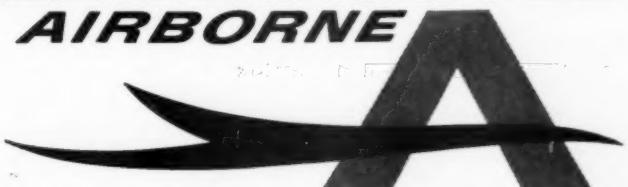
When ALL the necessary facets in the movement of air freight are brought together by Airborne to meet your exact shipping problems... THEY FIT, resulting in a fast, dependable service at less overall cost. Single-responsibility... synchronized to fit your timing... all details expedited for you. This personalized handling has helped thousands of the world's most important shippers. Airborne can do the same for you. Call or write your nearest Airborne representative today. Have a smooth-working air cargo movement that gets your job done the way you want it. And you'll start saving time and money, immediately.



\* Free map showing U.S. airports and all air routes sent when requested on your company letterhead

### FEATURING *Jet-Speed* SERVICE

Established in 1946, Airborne covers the entire globe with a network of 490 offices providing a complete domestic and international shipping service. General offices: San Francisco International Airport.

**AIRBORNE**  
  
**FREIGHT CORPORATION**

March by carrying 342,000 ton miles of first class mail, up 77% and 1,995,000 airmail ton miles, a 9% gain.

**MARITIME CENTRAL AIRWAYS** has become a full participant in the official air transport restricted articles tariff of the Air Traffic Conference of America.

The Pacific Steam Navigation Company has been appointed general agents in Peru for **BRITISH OVERSEAS AIRWAYS CORP.**

**AIR FRANCE** has opened nonstop DC-8 jet service from Los Angeles to Tahiti via Honolulu.

A shipment of oil drilling equipment weighing 13,262 pounds has been air lifted from New York to Bombay by **AIR-INDIA**. The airline describes the move as the largest single commercial shipment of cargo ever flown across the North Atlantic to India.

Valued at \$24,000, the shipment was purchased by Greaves Cotton Co., Bombay from the Export Division, National Supply Co. of Houston, Tex.

Figures released by the **AIR TRANSPORT ASSOCIATION** show that the local service airlines, in 1960, hauled 6.2 million ton miles of air freight and

air express, up 16% over 1959. They lifted 2.8 million ton miles of mail for a 23% increase.

**NORTHEAST AIRLINES** has inaugurated nonstop Convair 880 jet service between New York and Jacksonville.

**BRITISH WEST INDIAN AIRWAYS** has inaugurated weekly Boeing 707 jet service on the New York-Barbados-Trinidad route.

The **INTERNATIONAL CIVIL AVIATION ORGANIZATION** has prepared the following tables of statistics showing the development of civil air transport in terms of annual cargo traffic on scheduled services for the 10 years 1951 through 1960. The tables reflect data on carriers of all nations except Red China, the Soviet Union and countries which were not members of ICAO on December 31, 1960.

World Operations: Total (international and domestic in millions).

#### Ton-Miles Performed

Year	Cargo	Mail
1951	623	158
1952	678	171
1953	712	192
1954	753	228
1955	890	253
1956	1,014	274
1957	1,116	295
1958	1,144	322
1959	1,315	356
1960	1,493	411

Regional Far East network of **THAI AIRWAYS INTERNATIONAL** has been expanded to Djakarta, Indonesia. The Indonesian capital is served twice weekly on the airline's route from Bangkok and Singapore.

A New Orleans office has been opened by **KLM ROYAL DUTCH AIRLINES** at 1100 Tulane Avenue.

**UAT FRENCH AIRLINES** reports that cargo flown to Africa from the U.S. aboard UAT aircraft during 1960 increased 50% over 1959. The large rise was attributed to the growing importance of Africa and the emerging new nations in the world's political and economic affairs.

**AIR FRANCE** has opened a new office in White Plains, N.Y., at 200 Mamaroneck Avenue.

General agent for **AIRBORNE FREIGHT CORP.** in Australia is Australian Forwarding Agency Party, Ltd. The new agent will receive all Airborne shipments to any point in the country, break bulk, handle the necessary customs work, and forward to final destination.

AIR CARGO

A veter  
ways' ca  
is now ha  
marketing  
Am in I  
district c  
Benjamin  
trict man  
New Yo  
The n  
manager  
ways' I  
been fill  
be resp  
cargo s  
His new  
creative  
Name  
Latin A  
Jensen.  
manage  
all tech  
both o  
through  
New  
tatives  
office a  
bier, a  
A sh  
of two  
executi  
olved  
de Jon  
East m  
who re  
a spec  
de Jon  
for Eu  
Corr  
post v  
former  
freight  
Mov  
of the  
air ca  
West  
depart  
execut  
Richar  
to dir  
Wil  
of cus  
receiv  
cargo  
the sa  
tant t  
ice p  
gener  
Freigh  
Ameri  
JUNE,



National's Southern Transcontinental Route gives you a new one-carrier Jet Air Freight service between Los Angeles, Houston, New Orleans, Tampa and Miami.

plus NEW Air Freight Service on all SCHEDULED flights

Between...

**SAN FRANCISCO**  
**SAN DIEGO**  
**LAS VEGAS**

**ORLANDO**  
**JACKSONVILLE**  
and other Florida Cities

Also, All-Cargo Freight Service Between **NEW YORK** and **FLORIDA**  
Call your Freight Forwarder, Cargo Agent...or nearest National Airlines office, and

**SHIP**

**NATIONAL**

## PEOPLE

A veteran Pan American World Airways' cargo specialist, **George Moore**, is now heading the airline's world wide marketing service. Moore joined Pan Am in 1946 and has been New York district cargo sales manager since 1954. Benjamin Atkins, former assistant district manager in Miami steps into the New York sales post vacated by Moore.

The newly created job of cargo sales manager for Pan American World Airways' Latin American Division has been filled by **Carl Anderson**. He will be responsible for the direction of cargo sales throughout the territory. His new job is designed to implement creative sales effort.

Named to another new post in the Latin American Division was **F. P. Jensen**. In his new position as traffic manager, he will be responsible for all technical and procedural aspects of both cargo and passenger traffic throughout the division.

New Pan Am cargo sales representatives in the New York district sales office are **Pete Balamos**, **Mike Glotzbier**, and **Paratosh Guha**.

A shift in the duties and location of two key Air Express International executives has been announced. Involved in the moves were **M.E.A.L. de Jong** who goes to Tokyo as Far East manager and **George J. Weenen** who returns from Tokyo to take over a special assignment in New York. de Jong was formerly AEI's manager for Europe.

**Corn A. Bolt** steps into the European post vacated by de Jong. Bolt is the former manager of Netherlands Airfreight Consolidators.

Moving to better serve the needs of the air freight forwarder and the air cargo sales agent, Seaboard & Western Airlines has set up two new departments. Two experienced cargo executives, **Robert Williams** and **Richard J. Trainor**, have been picked to direct operations.

Williams, with the title of director of customer service, will supervise the receiving, handling and delivery of cargo to insure optimum service. At the same time, he will act as consultant to forwarders and agents on service problems. Williams was formerly general manager of Mercury Air Freight, and has been associated with American Airlines and Air Cargo, Inc.

Trainor will hold down the slot of director of forwarder and agency sales for the U.S. and Europe. In this post, he will head a staff offering export, air freight sales and marketing advice to forwarders and agents. Trainor has been associated with S&W in various capacities for the last eight years.

Seaboard's interline sales will be handled by **George Krausse**. In his capacity as interline sales manager, Krausse will be responsible for developing interline agreements with ground and air carriers and for increasing the amount of air cargo from domestic airlines. He was formerly manager of interline sales for Capital Airlines.

**C. W. Daly** has been boosted to manager of freighter scheduling by American Airlines. He was previously a senior analyst in AA's freighter scheduling division.

**Andrew Shiland** has been appointed North American sales manager of Pakistan International Airlines. His offices are located at 30 Rockefeller Plaza, suite 1438.

New director of transportation for the Chicago Association of Commerce and Industry is **Gerald E. Franzen**. His division considers all matters of transportation by air, highway, rail and water affecting Chicago's industrial and commercial interests.

The following promotions have been announced by Icelandic Airlines: **Frode "Fred" Skodt-Nielsen**, assistant traffic manager at New York International Airport; **Erling Aspelund**, assistant station manager at New York International; and **Bolli Gunnarsson**, ground operations manager New York and all European stations.

**Jerzy S. Mrozowski** is representing Trans World Airlines in Poland with the title of senior sales representative. A Polish national, Mrozowski will handle TWA's interline sales arrangements with LOT, the Polish airline. His office is at Ul. Spasowskiego 7 M2, Warsaw.

Los Angeles district sales manager for Iberia Air Lines of Spain is **Terry Watterson**. In his new post, Watterson will be in charge of sales in Southern California, Arizona, New Mexico, Texas, Hawaii and Las Vegas.



GEORGE MOORE

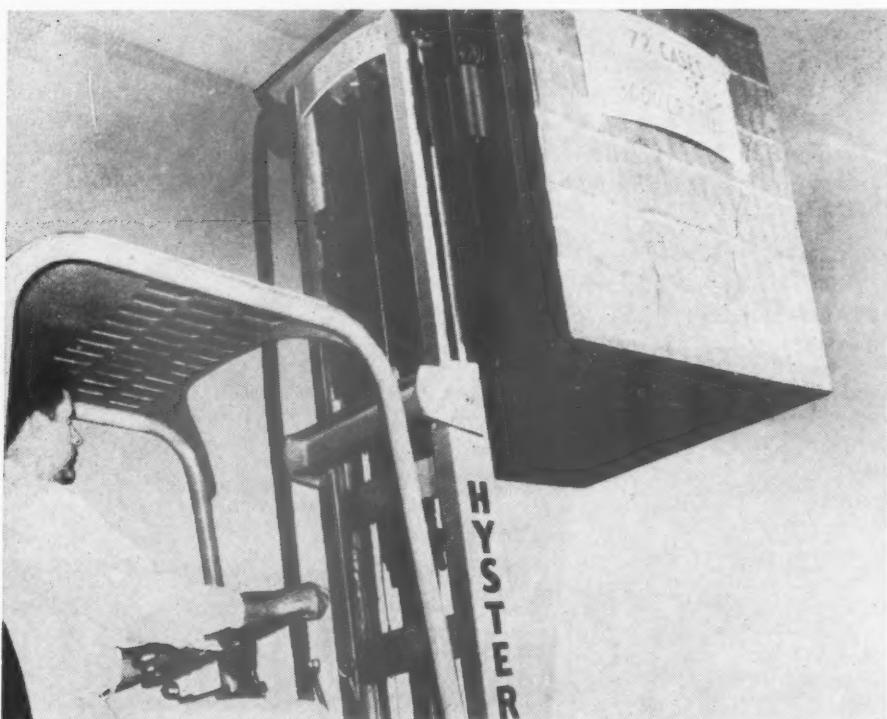


CORN A. BOLT



ROBERT WILLIAMS

# New Products and Processes



## Vacuum Truck Lifts Full Range Of Items

A lift truck that uses vacuum to lift an assortment of loads, such as appliances, cased goods, bagged goods, and paper rolls, has been developed by the Hyster Company.

In its announcement, Hyster says this new approach—the result of 2½ years of development—employs vacuum to handle almost any material that can be wrapped or sealed.

Surface vacuum is used to handle loads such as paper rolls and cartoned appliances, even if the surface is somewhat porous. The new Hyster unit has the ability to handle multiple package loads.

Using the internal vacuum principle, air is exhausted from a thin paper or plastic wrapping, drawing the cases or bags tightly together and locking them securely to the face plate of the lift truck attachment.

The new Hyster truck can be identified by a compact power unit mounted behind the driver's seat and a face plate mounted close to the upright. Experimental face plates so far developed include a flat plate that can be positioned vertically and horizontally; a special plate for handling cartoned appliances; and a paper roll face plate.

The face plates are light, easily detachable, and can be switched in seconds by the operator who does not have to leave his seat.

Hyster says advantages offered by the vacuum unit include: (1) no clamp arms, for more maneuverability and tighter stacking, (2) the face plate is closer to the upright and weighs less than other attachments, for less reduction of basic truck capacity, (3) less operator skill is needed, (4) operating cycles are faster and safer, and (5) no other support is needed to move unit loads.

### Transitier Fork Lift Rated at 70,000 Pounds

A cargo loader with a rated lift capacity of 70,000 pounds has been put into operation by the Alaska Railroad at Seward, Alaska. Produced by the Transitier Truck Company, Portland, a subsidiary of Pettibone Mulliken, the Super 70 is used to load and off-load cargo containers from ship side to storage and from storage to flat cars and highway trucks. One man, seated as driver in the vehicle's cab, handles the complete operation of the machine.

The Super 70's fork carriage can be rotated 12 degrees back and 90 de-

grees down from vertical. Lift height with forks level is 17 feet 2 inches, enabling the Super 70 to store loaded cargo containers one above the other. Forward reach at ground level is six feet two inches.

The unit moves on six B. F. Goodrich Rock Service tubeless tires 18.00-25 with 28-ply rating. Wheelbase is 11 feet, and the unit is 12 feet wide. The rear steering wheels can be turned 40 degrees. In a tight turn, the counterweight clears the inside of a 52-foot circle, but both of the right and left wheels can be individually braked to reduce the turning circle to 43 feet.

### Self-lighting Clipboard Beats Dark Working Areas

A new, battery-operated, flashlight clipboard is being manufactured and distributed by the Mutual Engineering & Mfg. Co., Los Angeles.

The clipboard, called "Ray-Rite," has a two-battery head which provides light over the entire working surface. Where record making must go on in dark or poorly lighted areas, the lighted board offers these advantages:

1. Elimination of costly errors through accurate reporting;
2. Elimination of unreadable figures and notations made in the dark;
3. Time saving;
4. Neater work; and
5. The board can be used as a flashlight to end fumbling for light switches and doors, and to prevent accidents on steps or ladders.



The "Ray-Rite" Flashlight Clipboards are made for three standard office size forms: invoice size (7 by 12 inches), letter size (9 by 13 and 9 by 14 inches), and legal size (9 by 16 and 9 by 17 inches).

Where even larger boards are

needed, "Ray-Rite" Flashlight heads may be obtained for mounting. The heads come in two-and three-battery capacities.

Prices of the boards range from \$5.30 (Invoice size) to \$9.50 (Legal size, aluminum, 3-battery). The entire line comprises some 20 items.

Lift height  
inches, en-  
tire loaded  
the other  
level is six

B. F. Good-  
tires 18.00-  
heelbase is  
2 feet wide.  
can be turned  
the counter-  
52-foot cir-  
ent and left  
braked to  
43 feet.

ard  
Areas  
l, flashlight  
ctured and  
Engineering

"Ray-Rite,"  
which provides  
ing surface.  
t go on in  
the lighted  
ges:  
stly errors

able figures  
dark;

l as a flash-  
ht switches  
ccidents on



## Portable Rooms Solve Storage Problems

Portable, all-aluminum structures called "Jiffy Rooms" promise to solve some of the storage problems for mobile equipment, tools (large or small), machinery, and flammable products. Manufactured by the L. S. Wilson Manufacturing Co., Chicago, the "Jiffy Rooms" provide complete weather protection and are easy to assemble and maintain.

The five-sectioned unit can be assembled or dismantled in minutes, using only a screwdriver and pliers. The ribbed, diamond-embossed aluminum panels make the structure fireproof and impervious to rust, rot and warp.

Fully weatherproofed and equipped with air vents, the "Jiffy Room" can be heated or cooled as required for an on-site office.

The utility structures are available in four stock sizes ranging from 4'3" square to 8' by 16'. Standard height is 6½ feet. A choice of baked-on enamel finishes is offered or the units may be ordered in natural aluminum.

Other optional accessories, such as plywood floors, awnings, windows, etc., are available.

## Rubber Bands Hold Loads When Pallets Are Moved

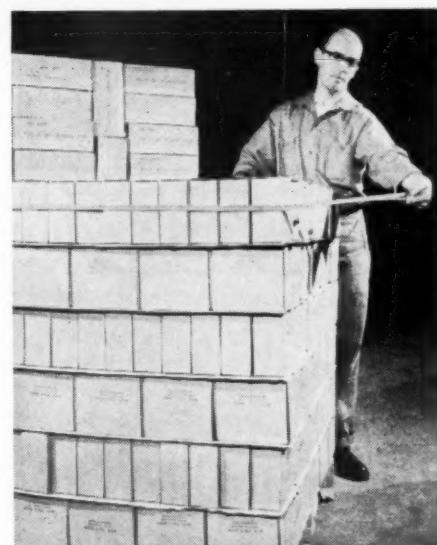
Giant rubber bands that snap around the top layer of cartons stacked on pallets are saving Helena Rubinstein, cosmetic manufacturer, at least \$1,200 a year in labor, damage and replacement costs, according to the B. F. Goodrich Company.

The rubber bands hold the top layer

of stacks of cartons of cosmetics so they won't slide and topple to the floor when the pallets are moved. The bands, 1½ inches wide and 6 feet long, can be stretched to 18 feet. They are manufactured by B. F. Goodrich Industrial Products Company.

William J. Armswood, Jr., Helena Rubinstein purchasing agent, said his company formerly used \$800 worth of masking tape each year to hold pallet loads steady. The tape could only be used once, took time to apply, and often ripped cartons when it was removed.

"The bands initially cost \$544 and are expected to last about three years," Armswood said. "They can be used repeatedly, and the ease with which the bands are applied and removed is resulting in an estimated labor savings of \$400 a year."



## TECHNICAL LITERATURE

### Tape Brochure Offered By Permacel

A comprehensive 12-page brochure has been developed by Permacel, New Brunswick, New Jersey, describing Permacel's complete line of pressure sensitive and heat sealing cloth tapes. The brochure covers the specific qualities, features and uses for each of the tapes, and illustrates applications with on-the-job photos.

In addition, tape dispensing equipment available from Permacel is shown as well as government specifications for Permacel Cloth Tapes.

### Prevent Many Accidents With Safe Work Clothes

The National Safety Council, in co-operation with the Institute of Industrial Launderers, has issued a leaflet on garment safety. The leaflet, describing "the seven deadly sins of work garments," may serve as an eye-opener to many companies.

Garment safety is an obvious, but

For further information on items  
mentioned in New Products and  
Processes or Technical Literature  
write: Readers' Service Dept., AIR  
CARGO, 1001 Vermont Ave., NW,  
Washington 5, D.C.

## IN SPRAWLING LOS ANGELES this exclusive insignia



- ★ Modern truck fleet, radio equipped
- ★ 50 years local freight experience



Phone your scheduled airline  
for all air freight shipments  
... and for general hauling  
in the Los Angeles area,  
contact us direct:

1100 East 5th Street  
Los Angeles 13, California  
Interstate and Intrastate Common Carrier

frequently overlooked area of safety, the leaflet notes. Defective and unsafe work garments are among the most common causes of lost time accidents in American business and industry. In almost all cases such costly mishaps could be prevented with a little care and know-how.

Ripped or torn clothing, trousers with cuffs, oil or chemical soaked clothing that is not changed frequently enough—these and other commonplace causes can lead to serious accidents, the leaflet notes. Serious falls, getting an arm or leg caught in moving machinery, burns, skin rashes, infections—these are a few "typical accidents" which are frequently caused by unsafe clothing.

A companion piece, "Selecting A Uniform," is also available. There is no charge for either brochure.

## How To Collect Past-due Accounts

A booklet called *How to Collect MORE Past-Due Accounts* has been made available by the United States Collection Association. The treatise should be an aid to executives faced with the problem of collecting ever-increasing past-due accounts.

The booklet was written by credit

experts whose extensive experience in collection work peculiarly equips them to write in this field.

In the work is described the dignified and friend saving principles of modern credit collection science. The authors suggest numerous powerful cash-getting techniques—to help get the cash in fast from "past-due" customers. These appeals are such that customer goodwill is retained.

## New Brochure Describes Conveyor Uses

A four-page brochure covering a broad range of package conveyor solutions to problems of lowering handling costs has been released by the Standard Conveyor Company. The brochure contains 19 pictures and story captions about recent newsworthy Standard Conveyor installations and products. A copy of the brochure may be had without cost.

For further information on items mentioned in *New Products and Processes or Technical Literature* write: Readers' Service Dept., AIR CARGO, 1001 Vermont Ave., NW, Washington 5, D.C.

## ON THE DOCKET

### JUNE

Canadian Warehousemen's Association, Annual Convention, Jasper Park Lodge, Alberta, Can., June 11-15.

The 8th Annual Material Handling Course, Industrial Management Center, The Lake Placid Club, Lake Placid, N.Y., June 18-30.

ICAO, Council Assembly, Montreal, Canada, June 19-24.

### JULY

1961 Chicago International Trade Fair, McCormick Place Exposition Center, Chicago, Ill., July 25-August 10.

### SEPTEMBER

IATA, 18th Annual General Meeting, Dublin, Ireland, September 10.

Houston International Trade and Travel Fair, Houston, Tex., September 22-October 1.

### OCTOBER

Produce Packaging Exposition, St. Louis, Mo., October 1-4.

## Advertisers' Index

Airborne Freight Corp. ....	33
Air Express—Div. of REA Express .....	8
Air Express Int'l Corp. ....	38
Air France .....	4
Atlantic Transfer Co. ....	37
Avianca .....	28
Braniff Int'l Airways, Inc. ....	3
British Overseas Airways Corp. ....	6
Continental Air Lines, Inc. ....	22
Delta Air Lines, Inc. ....	32
Japan Air Lines .....	17
KLM Royal Dutch Airlines .....	11, 12, 13, 14
Lufthansa German Airlines ...	2
National Airlines, Inc. ....	34
Pan American World Airways	30, 31
Seaboard & Western Airlines, Inc. ....	39
Trans World Airlines Inc. ....	40
United Air Lines, Inc. ....	1

## ANOTHER AEI FIRST FOR WORLD SHIPPERS

**GOLDEN ROCKET**  
**P. O. E.**  
(purchase orders expedited)  
**SERVICE**

*THE NEW INITIAL STEP FOR FAS AND FOB IMPORTERS*

With this exclusive new AEI service, importers who customarily buy FAS or FOB from overseas sources can now exert greater control of the actual movement of their goods at no increase in cost. For full details on this world-wide service to importers... call your nearest AEI office today.

**AIR EXPRESS INTERNATIONAL CORP.**

World Headquarters: 90 Broad Street, New York 4, N.Y.  
Pioneer in international air express since 1935.

Not affiliated with any other air express company.

**GOLDEN ROCKET OFFICES:** New York • Chicago • Newark • Los Angeles • Philadelphia • San Francisco • Detroit • Atlanta • Dallas • Houston • Miami • New Orleans • Oklahoma City • Washington, D.C. • San Juan, Puerto Rico

KET

Associa-  
n, Jasper  
an., June

Handling  
nagement  
aid Club,  
18-30.  
Montreal,

al Trade  
Exposition  
July 25

Meeting  
ber 10.  
ade and  
Tex., Sep-

ation, St.

ex

... 33

... 8

... 38

... 4

... 37

... 28

... 3

... 6

... 22

... 32

... 17

2, 13, 14

... 2

... 34

... 30, 31

... 39

... 40

... 1

R CARGO

## **THE ALL-NEW, ALL-FREIGHT, JET-AGE CL-44** **Built exclusively for Cargo...Yours exclusively on**

**SW** Seaboard World (formerly Seaboard & Western) the air shippers' airline to and from Europe...and beyond, will soon be flying jet-prop CL-44's. Its unique swing-tail section reduces handling and accommodates large single pieces up to 85 feet long by 11 feet wide by 6 $\frac{3}{4}$  feet high. Exclusively built for air-freight, Seaboard World's new fleet of CL-44's can solve your most difficult shipping problems with jet-age speed, efficiency and economy—bringing you faster handling of shipments at lower overall costs. Seaboard World offers regular flight schedules to and from Europe's major markets: **IRELAND** **HOLLAND**  
**UNITED KINGDOM · SWITZERLAND** **FRANCE**  
**BELGIUM · GERMANY** and beyond.



Call your local air cargo sales agent, airfreight forwarder or nearest SW airfreight office.



**SEABOARD WORLD AIRLINES**  
80 Broad Street, New York City, Whitehall 3-1500



## **TWA flies where the BUSINESS is!**

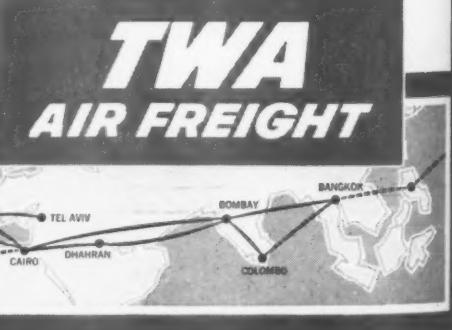
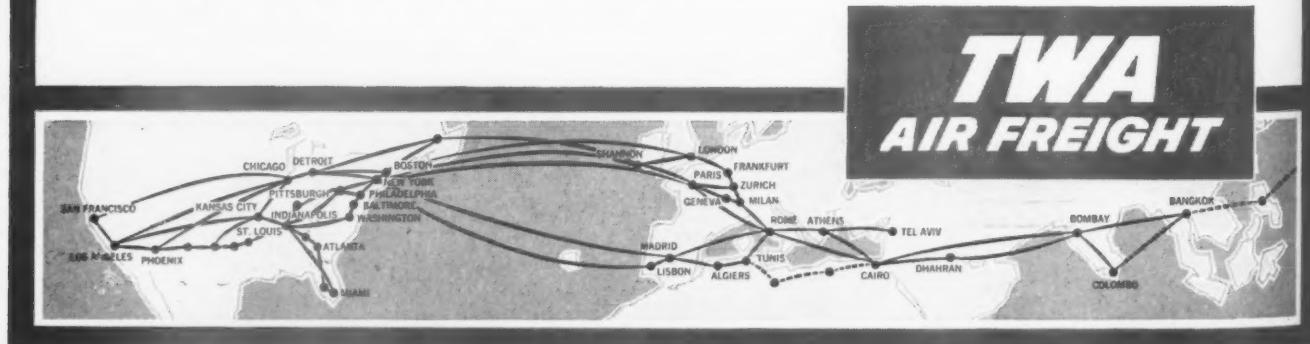


New York . . . major East Coast Air Freight center.



Paris . . . destination for U.S. products by the ton.

**ONLY TWA** carries freight between 70 thriving U. S. cities and 23 busy world centers overseas. Daily **JETSTREAM EXPRESS** flights...world's most dependable, longest-range all-cargo service ...fly your shipments non-stop coast-to-coast and to Europe. Next time you ship, call your freight forwarder...or TWA Air Freight.



s!

on.

d  
s  
e  
t.





## **TWA flies where the BUSINESS is!**



New York . . . major East Coast Air Freight center.



Paris . . . destination for U.S. products by the ton.

**ONLY TWA** carries freight between 70 thriving U. S. cities and 23 busy world centers overseas. Daily **JETSTREAM EXPRESS** flights...world's most dependable, longest-range all-cargo service...fly your shipments non-stop coast-to-coast and to Europe. Next time you ship, call your freight forwarder...or TWA Air Freight.

